EXHIBIT J

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

AT CHARLESTON

IN RE: ETHICON, INC. PELVIC REPAIR SYSTEM PRODUCTS LIABILITY LITIGATION — MDL NO. 2:12-MD-02327

THIS DOCUMENT RELATES TO:

CAROLYN LEWIS — CIVIL ACTION NO. 2:12-cv-04301

February 12, 2014
Charleston, WV

TRANSCRIPT OF TRIAL - DAY 3
BEFORE THE HONORABLE **JOSEPH R. GOODWIN**,
UNITED STATES DISTRICT JUDGE, AND A JURY

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Proceedings recorded by mechanical stenography; transcript produced by computer-aided transcription.

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I N D E X

THE COURT: Who is going to address something about Dr. Jordi?

MR. THOMAS: Yes, Your Honor.

THE COURT: That's what we need to hear.

MR. THOMAS: Thank you, Your Honor. David Thomas for the defendants.

Dr. Jordi, as I understand it, is the next witness to be called by the plaintiffs. Dr. Jordi is an analytical chemist. Plaintiffs and defendants agreed to split a mesh explant from Mrs. Lewis for analysis. Dr. Jordi received half, the Ethicon expert received half, and they proceeded to do their analysis on the Lewis explant.

When we received Dr. Jordi's expert report, Dr. Jordi, in addition to analyzing the Lewis explant, had also analyzed 22 other explants that had been provided to him by plaintiff's counsel. These are litigation explants. We did not know about those explants in advance of the Jordi report, and, as a result, Ethicon has not had the opportunity to do any kind of testing or analysis on the explants that Dr. Jordi includes in his report.

The same issue arose in connection with the testimony of Dr. Klinge.

THE COURT: I recall.

MR. THOMAS: And the Court excluded testimony about the explants, litigation explants because they're unreliable.

I ask that the Court do the same here and limit Dr. Jordi to his analysis of the Carolyn Lewis explant.

There are a number of reasons why the testimony of the other 22 would prejudice the defendants in this case, not the least of which it would introduce into this case the fact that there are 22 other cases against this defendant, and that would obviously prejudice us, the fact that his testimony about the other implants does not advance the ball, if you will, about the Carolyn Lewis case. The selection bias has already been recognized by the Court.

We don't have access to what they did. We didn't have the same explants that they did, so we didn't have the opportunity to test and to meet whatever opinions he might have. So we have no way to respond. So that's the prejudice to the defendants.

MR. ANDERSON: Yes, Your Honor. Ben Anderson. In Dr. Jordi's report, he stated that they had sent one of their representative to Steelgate, which houses thousands of explants. We put in there that when we received the samples, we saved half of them and sent half of the sample back to Steelgate. The defendant was aware of that.

Defendants say they have not had the opportunity to review it. They've had months and months to review it. All they had to do was ask. They saw in his report that half of the sample had been saved, just like it had for Mrs. Lewis.

THE COURT: There are thousands of explants at Steelgate?

MR. ANDERSON: Steelgate is --

THE COURT: Well, how did he select the samples, what methodology?

MR. ANDERSON: Yes, Your Honor. The methodology was he sent one of his Ph.D. lab techs from Jordi Labs and said go and get every TVT, TVT-O sample that you can as long as there's enough to be able to do testing on it. So warts and all, without any prior testing, without any prior knowledge, they went to Steelgate and selected all of the ones that had enough to do a battery of tests that are --

THE COURT: So Steelgate has thousands of explants but only a handful of TVT explants.

MR. ANDERSON: Well, more than a handful.

THE COURT: Twenty-some?

MR. ANDERSON: That method criteria of do we have enough to where we can, A, cut it in half to make sure the defendant has the same opportunity to do testing that we did. That was the first criteria. B, that after it is cut in half, that we still have enough to be able to do the different types of analyses, which six or eight different types of analyses --

THE COURT: How many TVT explants were there, without regard to his Ph.D. student's criteria or his criteria?

MR. ANDERSON: There were dozens and dozens of them. And a lot of them, some of them were not in formalin, so they were all dried out. That would provide no good information. Many of them were too small.

The slings, unlike the prolapse meshes, when they take them out, literally they are slivers about the size of your pinkie, and so you're talking microscopic. And so they had to try to determine from these samples are we even going to have enough to make sure that when we cut it in half -- and we photographed that entire process, Your Honor, to make sure --

THE COURT: You photographed every TVT explant that Steelgate had and chose a certain number from those photographs?

MR. ANDERSON: Yes, Your Honor, we did.

THE COURT: Have the defendants been provided all of the photographs of every explant that Steelgate has?

MR. ANDERSON: We have all of the photographs that -- of the explants that we looked at.

THE COURT: No, no, no. I mean I assume you looked at all of them, right? I may not be understanding you. I understood that you sent a Ph.D. associate to Steelgate, whatever that is, and they looked at every TVT explant. Is that right?

MR. ANDERSON: All of the TVTs and TVT-Os were brought out in the sample bottles to be able to determine

whether they were so tiny that it would make no sense to cut them in half and still give half to the defense. So they did look at all of those, and the only ones that were large enough were brought back. And I think it's significant that not all of them showed degradation. So we didn't just select the ones that looked best for us. We had some that hurt us. But we put them in there, and it's in his report.

THE COURT: What I'm trying to determine is how many -- I understand one of the criteria which I assumed Dr. Jordi would testify to was that he instructed his associate to only select samples which were large enough to cut in half. Is that right?

MR. ANDERSON: And to still be able, once they were cut in half, to be able to do the battery of tests.

THE COURT: All right. And he instructed him to photograph all samples, including those that weren't large enough.

MR. ANDERSON: No, we did not photograph the dozens of ones that weren't large enough.

THE COURT: Dozens? Hundreds? Tens? What?

MR. ANDERSON: I don't have the list in front of me, Your Honor. I apologize. I can try --

THE COURT: So what -- I don't get what -- all right. Let me hear from you.

MR. THOMAS: Your Honor, there are lots of moving

parts in this case. I'll be honest with you, if the plaintiffs told us that there were mesh explants, half of mesh explants available for us to review in advance of Dr. Jordi's report, David Thomas didn't know about it. Whether somebody on the trial team or somebody within the litigation --

THE COURT: How did you make the notification?

MR. ANDERSON: In his report.

MR. THOMAS: That's the point. I did know about it at the time that I got his report, and I took his deposition about a couple of days after his report. And at that point I see that there are 22 explants that we don't have notice of.

Even if, Your Honor, even if I was able to get access to the explants, you'd like to think that I'd be able to have my expert look at them before I have to take the deposition of Dr. Jordi. And then there's not enough time for my expert to do the same analysis and to offer any opinions that might be appropriate to respond to the opinions about the additional explants.

The only explanted issue here, Your Honor, is Carolyn Lewis. And I would suggest to the Court that there's nothing about these other 22 explants that makes Dr. Jordi's opinion more likely than not about degradation, which is the issue he's here for.

MR. ANDERSON: May I respond, Your Honor?

THE COURT: Yes. I'll let you go back and forth.

I'll be like Judge Dennis Knapp, who was on the bench when I started practicing law. If I had time, I'd let you go back and forth until you both got tired. But we'll just go a couple more times. Go ahead.

MR. ANDERSON: The report was -- the report was served, and his deposition, first deposition was taken at the end of October, four months ago. He found out in the report, which was a month before that, Ethicon did, that there were these samples. Not one e-mail, not one request for them to be able to go down there and look at them.

Then he took the deposition. He had an opportunity to depose him on each and every one of the slides, the SEM analysis, the high-magnification analysis, and any of the other analyses. And, in fact, he did that, not for one, but two days, because he came back and did another deposition two months later.

So he has had months for his experts to take a look at this. The idea here feels like, Your Honor, is let's just not ask for them, and then when Mr. Anderson wants to offer them in his case, we'll say we were sabotaged.

But they've had months and months to do this. Their expert is Exponent, the largest defense expert analysis company in the world, in Philadelphia. They can crank out product, Your Honor. Not once did they say to us, "Please let us have these and we will send our people." In fact, they

sent representatives from Exponent to Jordi's Labs before. They were there for Mrs. Lewis's sample when it was received. Not once did they reach out and say, "You know, we'd like to do the same thing on the other 22."

So to lie and wait until we come to the courtroom now and then to say, "Oh, over these last four months, we've not had an opportunity to do this" is not fair.

THE COURT: I'm more concerned about the methodology and -- the methodology used to select the implants that were examined.

MR. ANDERSON: Take them all, warts and all, as long as they're large enough to be able to cut it in half so that his people would have an opportunity and so that we would have an opportunity to do our testing. That was the idea, sir.

THE COURT: And that would be the testimony of your witness.

MR. ANDERSON: He's sitting in the courtroom. He can proffer it up right now, if you'd like.

THE COURT: I mean I take it that probably the student who actually did that is not here.

MR. ANDERSON: He's not.

THE COURT: But that was the direction that your expert gave, was to take every TV sample, TVT or TVT-O sample that was large enough to cut in half and -- one; two, wasn't dried out; three, anything else?

MR. ANDERSON: It was large enough to be able to perform six different types of tests on it, that we wanted to make sure if we had an opportunity to do all those tests, that they would have an opportunity to do the tests. And there's already a limited amount of sample. So we had to make sure that there was plenty to do SEM testing and some other types of testing that require you to use the product, and it gets destroyed. So that's why we saved half, and we had to make sure there was enough to do six different types of tests on the material.

THE COURT: So the samples were selected to meet the protocol that your doctor designed to do the testing.

MR. ANDERSON: Well, it's an industry standard. He was going to run industry standard testing for determining degradation of polypropylene.

THE COURT: All right. So we're right at the eleventh hour, so I'm trying to be probing on this. So the six tests that were used to select the samples, were these six tests that are the standard protocol for testing polypropylene for degradation? Is that correct?

MR. ANDERSON: They are, Your Honor. They're not the only ones, but they are the primary ones.

THE COURT: Well, then, how were they chosen from -- how were other tests omitted and those six chosen?

MR. ANDERSON: If I could just clarify one thing

that I think we've gotten -- at least I've gotten maybe confused, Your Honor, and I apologize.

THE COURT: Okay. That's not hard to do.

MR. ANDERSON: There's different types of testing you can do in order to look at degradation of -- and here let's just talk about polypropylene fibers, to make it specific. One is you look at --

THE COURT: I hate to interrupt you. Let me interrupt you for just a second. Did he do the same tests that their expert did?

MR. ANDERSON: They did the same tests we did.

THE COURT: Exactly?

MR. ANDERSON: Yes, sir.

MR. THOMAS: I don't think that's true.

MR. ANDERSON: Oh, I don't know if his experts chose to do every one that we did.

THE COURT: Did they do more than you did?

MR. ANDERSON: No, they didn't do more than we did.

THE COURT: All right. First, back to my original question. There are six standard tests that you did, but there are more than six standard tests. Your expert chose six particular tests, correct?

MR. ANDERSON: In order to -- no, there are no other tests outside of the six that he did that I am aware of, Your Honor.

THE COURT: All right. And that would be his testimony.

DR. JORDI: There was one other test that we chose not to do. It wasn't appropriate for this particular work setting.

THE COURT: All right. So let me run through the criteria again. The criteria is large enough to cut in half, large enough to conduct six standard tests on, but not a seventh standard test, which was not appropriate.

MR. ANDERSON: Correct.

THE COURT: And met whatever other criteria with regard to condition? You said weren't dried out or something like that.

MR. ANDERSON: That would be -- that would be it, Your Honor, I think. The only thing I want to point out, just so that the Court is aware, is not all of those tests could be run on each one of the samples because --

THE COURT: So when they selected them for those six tests, they ended up selecting samples that those six tests couldn't be run on.

MR. ANDERSON: What happens, Your Honor, is you have these tiny fibers, and sometimes when you run it through these $500,000 machines -- okay? -- and you're dealing with microscopic things, sometimes they become destroyed as you're trying to look at them, and then you have to use more particle

to try to get the test to come out right. And if you've used up too much particle, you may not get to the next six because you don't have any left.

THE COURT: So on some of these samples you ran six standardized tests. On some of these samples you ran fewer than that because of an insufficient amount of material to complete the test.

MR. ANDERSON: Because of the nature of destructive testing of polymers.

THE COURT: Give me an idea of how many you ran six tests on and how many you ran less tests on.

MR. ANDERSON: I have two binders this big, Your Honor, and so I would have to go through here and try to pull all those out. It's twenty-four samples and six tests.

THE COURT: Well, 24 -- I excluded in Dr. Klinge's thing, the report didn't provide any information about how he obtained the particular samples.

Here this morning you're providing me with an explanation of how he selected them, but I would like the answer to this, to me an important question. How are we to know that the large samples are representative of explants, that is to say, that there's a scientific and reliable basis for concluding that 23 out of dozens or more is a representative sample?

MR. ANDERSON: Your Honor, the best that we could do is try to collect explants that were available. We took every

one that we could. We looked at every one of them, and we had all of that analysis in these books and that he deposed him on. We left no test out that was done. And of those, some of them showed degradation, some did not. They're all explanted and the same battery of tests are done on polypropylene. So it is more of an objective test than a subjective test.

In order to determine whether or not -- what the denominator is, if that's what you're looking for, Your Honor, the only way to look at the denominator is -- I'm sure they'll point out on cross-exam of one of our witnesses, "Well, this has been in hundreds of thousands of women and it doesn't degrade in all of them." No, but we have a representative sampling --

THE COURT: How do we know it's representative? That's my question. The only criteria that you've given me is not an indicator of representation. That is to say, you selected only samples -- and I grant you, they're the only ones you could get -- that were big enough. I don't know that because the sample was big enough shows that it's representative of explants.

MR. ANDERSON: By way of example, Your Honor, an analogy. Dr. Klosterhalfen on behalf of Ethicon has a database of explants, okay? Some of those explants, you can determine whether or not there was fibrotic bridging. Some you can't, because they weren't big enough. Some you can

determine whether or not there was scar plating. Some you can't because they weren't big enough or not a good enough sample.

What you do is you collect what you can and you do an analysis of those. And within the number that you have, you can make some determination as to, okay, out of this representative sampling of explants --

THE COURT: The problem is the representative part. That's what I'm trying to figure out with regard to *Daubert* and *Kumho Tire*, is was there a scientific methodology used to show that this is a representative sample.

In other words, if the only people I could find that had malaria were people that were in a malaria ward at a hospital, they would not be necessarily representative of everybody in the world that had malaria. As I think I pointed out -- and I'll say it again -- my analogies are always terrible, but go ahead.

MR. ANDERSON: I would say that, you know, Your Honor, they're welcome to point this out on cross-examination, but the only way to get explants is when they come out of women. You can't go and affirmatively take them out and just say we're going to take these out of healthy women and we're going to take these out of unhealthy women and we're going to compare it so that we have a denominator of all of the healthy explants with the unhealthy explants.

THE COURT: Okay. What's your expert on polypropylene going to say with regard to examining explants, if at all?

MR. THOMAS: Your Honor, my expert only has looked at the Carolyn Lewis explant.

THE COURT: That's all I need to hear. Your expert is qualified to offer, as I understand it, without objection, opinions about polypropylene degradation; is that correct?

MR. THOMAS: Correct, Your Honor.

THE COURT: And he may also offer opinions related to the degradation, if any, of Miss Lewis's explant. He's not a doctor. Neither he nor your polypropylene expert, absent a medical degree or a qualification in that regard, may talk about the effects of polypropylene in the human body. Is that clear enough?

All right. Let's give you -- we're almost five minutes till the jury comes in. I'm sure you need time to straighten your desk out. Yes, sir?

MR. THOMAS: I don't think you addressed the ultimate question, Your Honor, whether Dr. Jordi will be permitted to talk about the additional explants.

THE COURT: No --

MR. THOMAS: Thank you.

THE COURT: -- he may not.

MR. ANDERSON: What if we voir -- what if I offer to

voir dire him for proffer in front of the jury on that particular issue?

THE COURT: No. We'll start at 9:00.

MR. THOMAS: Thank you, Your Honor.

THE COURT: Court is in recess.

MR. ANDERSON: Your Honor, I'm sorry. Can I address one more thing with you?

THE COURT: You may.

MR. ANDERSON: I'm so sorry. So, Your Honor, Dr. Jordi's expert report represents thousands of pages. He did a battery of tests on not only two dozen of these explants, he has dozens of people at his laboratory, Ph.D. chemists, a lot of different machines that went into this, okay?

We also looked at pristine samples. So that was more money. So if, if he -- we can't bring in the information about their analysis that took months to do at hundreds of thousands of dollars of cost, because these are not inexpensive, if he -- when I put him on the stand, he's only going to talk -- being allowed by Your Honor's ruling to talk about one sample, it would be patently unfair and unfairly prejudicial if Mr. Thomas were allowed to come in and say, "How much money have you spent in this case? Oh, $500,000?" And it wouldn't be representative of what the jury can actually hear.

THE COURT: This will shock you. I agree.

MR. THOMAS: I don't intend to do that, Your Honor.
THE COURT: All right.
MR. ANDERSON: Thank you.
MR. CARTMELL: I apologize. One more thing. We are going to start with videos. We have three, and there are some objections by the defense that are left.
THE COURT: Okay. Well, let's go ahead and get this done.
Would you tell the jury we're going to be starting just a few minutes late? I'm sure they'll be shocked.
MS. JONES: Your Honor, we were told we were starting with Mr. Jordi.
MR. CARTMELL: Who told you that?
MS. JONES: Ben told me that earlier.
MR. CARTMELL: Yesterday I said we were playing videos first. I apologize.
MS. JONES: All I'm asking is for you to let us know who you intend to play and what we're going to talk about.
MR. CARTMELL: Isenberg, Angelini, and Hart.
THE COURT: Okay. And what are the issues?
MR. CARTMELL: Isenberg first.
MR. COMBS: Judge, they told us they were playing Muhl and Jordi. I've got to go back and get the stuff. I mean it's in the room right adjoining the courtroom.
MR. CARTMELL: I'd just like to make the record

clear. We had e-mails last night. We're required by our agreement to tell them the night before who we are considering. I'm not sure we're required to tell them the order that we're doing it. I don't know who told you that, but we have told them before who we're playing today. And we're ready to talk about Isenberg and Hart and Angelini.

MR. COMBS: Well, Judge, there's also an agreement that we would get a cut of the deposition that they intend to play. As far as I know, we don't have that. The Angelini cut we got at 7:52 a.m. The agreement was we would have it the night before. The agreement was they would give us the video, the clip to be played. If we have that, I don't know --

THE COURT: All right. We can't all talk at once. All right. Back here.

MR. CARTMELL: Well, here's the problem that's happening here, is we get these things done and signed off on. They've been done and signed off on a long time ago. There are remaining objections. We started to take the position because we were in their offices all day and all night for weeks that we couldn't come to an agreement on some, so we said, "Okay. We'll come here to court and before we put them on, if you want to make your objections, make your objections."

It sounds like they're saying that they haven't had these signed off complete deals that they're objecting to for over a

week. They have.

Now, the video issue is just simply Michael being able to put the material on a video and get it done. But they know the testimony we intend to play; they have for weeks. And the jam-up here I guess is what you're saying is the video doesn't come. You know what's going to be played.

MR. COMBS: Judge, I don't know what's going to be played. We stood here yesterday and went over the Hinoul cut. We walked up here. Exhibits were being proffered I'd never seen. It ended up not being the exhibits. We then went over the cut. We compared the cut to the cut I had, and they ended up not playing all that cut. So I end up standing up here and all of a sudden it just stops.

THE COURT: I'm going to give you 15 minutes to get these things, as best you can, ready. If you can't, if either side says to me that you can't get them ready, if either side says you can't get them ready, then you'll provide me with the court reporter's transcript of the deposition with the objections and everything in it and we'll start with somebody reading it on the stand; and when we get to an objection, I'll rule on it, okay?

MR. COMBS: And so it's Isenberg, Angelini, Hart?

MR. CARTMELL: Yes.

THE COURT: And, of course, that would apply to all future video depositions as well if we can't do these. I mean

I am surprised by what I'm seeing. I'm not dealing with inexperienced people. You've tried big cases before. You've met with opposing counsel before. You've worked out depositions before. The rules provide that I should be doing this by the transcript, and that's the way I can do it in the absence and in the exercise of my discretion allowing another methodology. I'm about to run out of patience for other methods.

Fifteen minutes, twenty minutes -- in twenty minutes, 9:20, we'll start. Thank you.

(Recess)

(The jury entered the courtroom.)

THE COURT: Good morning, ladies and gentlemen. I'm sorry for the delay. You know, sometimes when your computer goes down, you have to unplug it and plug it back in. I kind of had to do that. So we're going to -- we've rebooted.

Call your next witness.

MR. CARTMELL: Dr. Richard Isenberg, Your Honor.

THE COURT: All right.

(Video of Dr. Richard Isenberg played.)

MR. CARTMELL: I apologize for interrupting. Plaintiffs have ended their examination of Dr. Isenberg.

THE COURT: All right. Ladies and gentlemen, what follows will be a portion that the defendants offer in response.

(Video of Dr. Isenberg resumed.)

MR. COMBS: Judge, that ends the defense questions.

THE COURT: All right. This is now redirect examination.

(Video of Dr. Isenberg resumed.)

MR. CARTMELL: Your Honor, that's the end of Dr. Isenberg's deposition.

THE COURT: All right. Call your next witness.

MR. COMBS: Judge, there's no need for a sidebar at all, but could I just briefly talk to the court reporter to just reflect the agreement regarding the exhibits that we had before that deposition was played?

THE COURT: Yes.

MR. COMBS: Thank you.

THE COURT: You previously provided the Court with a transcript. Is that the one you want filed or are you filing a separate one?

MR. CARTMELL: We can file the transcript.

THE COURT: I assume you want it in the record.

MR. CARTMELL: Yes, we did.

(Bench conference with Mr. Combs and Mr. Cartmell)

MR. COMBS: Ma'am, just to reflect that prior to the deposition being played, we had an agreement on the exhibits, and we did not object to Exhibit 957. For Exhibit 120, it's my understanding plaintiffs were only moving to admit the

parts that were shown on the screen. No objection to 1002, but that's a learned treatise. No objection on 905. On 803, there was an objection, just subject to the Court's ruling yesterday on this identical exhibit. And so any questioning or the admission of that exhibit would just also be subject to the same requirements as the Court ruled upon yesterday in regard to that exhibit.

MR. CARTMELL: That's agreed.

(End of bench conference)

THE COURT: All right. Okay. Mr. Cartmell, call your next witnesses.

MR. ANDERSON: Yes, Your Honor. Plaintiffs call --

THE COURT: The exhibits, if you want them in the record, should be presented to the clerk.

MR. ANDERSON: Plaintiffs call Dr. Howard Jordi.

THE COURT: Okay. I'm just reminding you they need to get to Robin.

THE CLERK: Dr. Jordi, if you'll raise your right hand.

HOWARD JORDI, PLAINTIFF'S WITNESS, SWORN

DIRECT EXAMINATION

THE COURT: You may proceed.

MR. ANDERSON: Thank you, Your Honor.

BY MR. ANDERSON:

Q. Good morning, Dr. Jordi.

A. Good morning.
Q. Please tell the jury your name.
A. Howard Jordi.
Q. Where do you live, sir?
A. Bellingham, Massachusetts.
Q. And what is your profession?
A. I'm a chemist, an analytical chemist, biochemist, polymer chemist. I practice in all --
Q. I'm sorry?
A. I practice all those areas.
Q. How long has that been your profession, sir?
A. Well, really all my professional life.
Q. How long is that?
A. About 35 years now.
MR. ANDERSON: Your Honor, if I may approach.
THE COURT: You may.
BY MR. ANDERSON:
Q. Doctor, I'm handing you what has been marked as Plaintiff's Exhibit 20C. Do you recognize that as a copy -- well, what do you have in front of you?
A. My resume or CV.
Q. Sometimes known as a curriculum vitae?
A. Yes.
MR. ANDERSON: Your Honor, if we could just offer the CV.

THE COURT: Is there objection?

MR. THOMAS: No objection, Your Honor.

THE COURT: It may be received.

BY MR. ANDERSON:

Q. Doctor, just tell the jury a little bit, if you could, about your background, training, and experience after you got out of high school and up until today.

A. I obtained my bachelor's degree in chemistry from Northern Illinois University in 1967. I continued my Ph.D. work and got my Ph.D. in 1974. I was shipped off to the U. S. Army where I worked at Walter Reed Army Medical Center. We worked on biodegradable polymer implants, among other things, where we were replacing portions of soldiers' jaws that might be blown off by a bullet, trying to repair the damage.

Then I went to work for Water's Associates in Milford, Massachusetts where I ran analytical laboratories. And then I went to LC Laboratories briefly. Unfortunately, the company went out of business. And I started my own business, which I've been in since 1980 to this day.

Q. And has your work at Jordi Labs also involved these fields of polymer chemistry, polymer science, and biochemistry?

A. It does.

Q. Tell the jury, please, Dr. Jordi, in a general sense what are some of the types of things that Jordi Labs does. And if

you could -- Your Honor, may I approach again?

THE COURT: You may.

MR. ANDERSON: When he's turning, the microphone is a little -- scoot it this way. Thank you.

BY MR. ANDERSON:

Q. So back to the question, can you please tell the jury a little bit about what Jordi Labs does?

A. Well, we analyze polymers and plastics in all their various facets. So we do failure analysis, we do additives analysis, we deformulations, we do litigations where there might be patent infringements where one manufacturer might be copying another's -- or allegedly copying another's product. We do a lot of testing to determine degradation.

Q. Okay. Anything else?

A. That pretty well covers it. We do a myriad of tests.

Q. I heard you say product failure analysis. Could you just explain to the jury what product failure analysis means for you in your industry, in the polymer industry?

A. Well, it could be virtually anything that's made from a plastic. You could get a bumper in from a car that's cracking, a paint can with a bottom falling out, or I remember running -- analyzing artificial hips that were made out of polypropylene. So I was checking it for degradation after it had been implanted in the body for long periods of time. The tests we were running were looking for degradation.

Q. Okay. Let's go back a little bit. What is biochemistry?
A. Biochemistry is the sum total of all reactions in the body and the components that make up the body or any living tissue.
Q. You mentioned the word polymers. Just explain in a layperson's terms what we're talking about when we're talking about polymers.
A. Polymers would be like where you have monomer and the monomers join to make a polymer. An analogy would be a house, a brick house, and each brick would be a monomer unit, and then when you put all the bricks together, you wind up with a house, which is the polymer.
Q. And is polypropylene a polymer?
A. Yes, it is.
Q. And has your work over these last 30 to 40 years involved product failure analysis of polymers, including polypropylene?
A. It has.
Q. Are there standard tests in your industry for analyzing polymers like polypropylene to determine whether or not they have degraded?
A. Yes.
Q. And have you performed some of those standard tests that we'll talk about to the jury today?
A. Yes, definitely.
Q. What does polymer degradation mean, please, just in

laypersons' terms? We're not all Ph.D. polymer chemists. So in a layperson's terms, what is polymer degradation?

A. It's basically a change in chemical and physical properties compared to a pristine or unused product.

Q. And have you published in the peer-reviewed literature, sir?

A. Yes.

Q. Approximately how many publications?

A. Twenty.

Q. And have some of your published articles listed in your CV also involved research by you on biodegradable polymers?

A. Yes.

Q. And have some of the publications involved polymer degradation?

A. They have.

Q. And during your 40 years of work in this field, have you ever tested medical devices for polymer degradation?

A. Yes.

Q. And have you tested explanted medical devices for polymer degradation?

A. Yes, like the hip.

Q. Has some of the work that you've done over the last 40 years in terms of analyzing polymers for degradation looked at animal studies where they have explanted polypropylene from animals in order to determine whether there was degradation?

A. Yes.
Q. Can you give me an example of some of the testing that -- or give the jury some idea of some of the testing you've done over the last 30 to 40 years with regard to polymer degradation for products that would be in the human body, other than the artificial hip that you mentioned?
A. The techniques that were used you mean?
Q. No, the actual products. Have you looked at contact lenses?
A. Oh, contact lenses, yes; artificial knees, artificial hips.
Q. You mentioned some work with the Army in terms of soldiers, looking at the jaw --
A. Poly lactic and glycolic acid copolymers, that was the material that was used.
THE REPORTER: Say that again.
THE WITNESS: Poly lactic and glycolic acid copolymers.
THE COURT: I still didn't hear it. Try me one more time.
MR. ANDERSON: Go slower, if you could.
THE WITNESS: Poly lactic and glycolic acid copolymers.
THE COURT: That's going to be on a test.
BY MR. ANDERSON:

Q. Have you ever been employed by medical device manufacturers to analyze their medical devices?
A. All the time.
Q. Approximately what percentage of your work has been for medical device manufacturers?
A. The majority of it is now. It's about 90 percent.
Q. The 90 percent of your work that goes into looking at product failure analysis for medical device manufacturers, have they asked you to look at their devices in order to try to improve the safety of the devices?
A. Yes, and failure, and just general testing.
Q. Was any part of that work, at least in part, to help identify defects with polymers that would lead to improved patient safety?
A. Sure, yes.
Q. Doctor, at my request did you perform an analysis of the polypropylene Prolene TVT devices?
A. I did.
Q. Did I ask you to look at both pristine samples as well as explanted -- an explanted sample?
A. Yes.
Q. And as part of the work in being able to express opinions here to the jury today, did I also ask you to look at peer-reviewed publications?
A. You did.

Q. Even before your work in this case, as part of your normal job routine do you review scientific literature?
A. All the time. It's necessary to keep up with current work, and the fields are always changing, just like new cars every year, and new methods come out all the time.
Q. Please tell the jury approximately how many scientific articles you've reviewed just for purposes of being able to talk to them here today about polymer degradation in the Prolene and TVT.
A. Hundreds.
Q. And did I also ask you to look at internal Ethicon documents?
A. You did.
Q. And Ethicon depositions?
A. Yes.
Q. How many pages of Ethicon documents and depositions have you reviewed before you came in here to talk to the jury today?
A. Several thousand.
Q. Did I ask you to prepare a report in this case?
A. You did.
MR. ANDERSON: Your Honor, may I approach?
THE COURT: You may.
BY MR. ANDERSON:
Q. I'm showing you what has been marked as Plaintiff's

Exhibit 20. Does that represent the report that you prepared in this case, sir?

Sorry. I don't need you to look through the whole thing.

A. No, I'm just looking to make sure -- but yes.

Q. And did you prepare a supplemental report at my request as well?

A. I did.

Q. And did you also review a TVT Prolene device?

A. I did.

Q. And did I also ask you to look at an explant sample from Mrs. Lewis?

A. You did.

MR. ANDERSON: If I could have -- first of all, I'll ask you to pull up Exhibit -- may I approach, Your Honor?

THE COURT: You may.

BY MR. ANDERSON:

Q. Is this the sample bottle from Mrs. Lewis's explant that you received at your -- at Jordi Laboratory?

A. Yes.

MR. ANDERSON: Your Honor, may we offer this?

THE COURT: Without objection?

MR. THOMAS: Yes, Your Honor.

BY MR. ANDERSON:

Q. If we could show that. Is this the sample bottle from an explant from Carolyn Lewis's body that you received at Jordi

Labs?
A. Yes.
Q. Were representatives of the defendants there when you received this?
A. Yes, there were.
Q. And what did you do with the representatives of the defendants to the sample after you removed it from the bottle?
A. The sample was split in two equal parts, half for us and half for them.
Q. Their experts take their part and go, and you kept your part?
A. We can test our part, they can test their part. Same thing.
Q. Are there tests that are standard in your industry for looking at the degradation of polymers like the polypropylene Prolene in TVT?
A. Yes.
Q. I want to spend a little time talking with the jury today about a couple of those tests. Certainly I don't want to go through that entire notebook. We may be here longer than any of us would like. But I do want to talk about a couple of those tests with you today, if I could, sir, please.
Have you heard of the term SEM analysis?
A. I have.
Q. What is an SEM analysis with regard to using it for

determining whether or not a polypropylene has degraded?
A. SEM stands for scanning electron microscopy, and it's just a fancy name for a high-powered microscope that lets us blow up the individual mesh particles, fibers, so we can see the cracks, if any, on the surface.
Q. And did you perform any analysis of cracks that came from the surface as part of analyzing the degradation of the Prolene that was explanted from that Mrs. Lewis's body?
A. We did.
Q. What is that test called?
A. Big words again. Fourier Transform Infrared Spectroscopy microscopy. We call it FTIR microscopy for short.
Q. And in shorter terms and hopefully laypersons' terms, can you tell us what FTIR microscopy seeks to do in your field?
A. It seeks to give us a picture of the structure of the molecule that we're looking at, the chemical composition of the structure of the -- in this case, mesh.
Q. Are SEM and FTIR microscopy two tests that are standard in your industry for analyzing polypropylene explanted material?
A. Yes.
Q. Now, you said that you reviewed hundreds of publications. I'd like to go through three of those with you today, okay?
A. Okay.
MR. ANDERSON: All right. May I approach, Your

Honor?

THE COURT: You may.

BY MR. ANDERSON:

Q. I'm showing you what we have previously marked as Plaintiff's Exhibit 820. Doctor, did you review that as part of your work in this case?

A. I did.

Q. And did you rely on that, at least in part, for formulating your opinions in this case?

A. I did.

Q. And does this come from a publication that is recognized and reliable in the scientific community?

A. It's a peer-reviewed journal, yes. Yes.

Q. Is it recognized and reliable?

A. It is.

MR. ANDERSON: May we offer it?

THE COURT: You may follow the Rule 803(18).

MR. THOMAS: No objection, Your Honor, as an 803(18).

MR. ANDERSON: A learned treatise.

THE COURT: Right.

MR. ANDERSON: Yes, sir.

THE COURT: I apologize to the jury for that shorthand. The lawyers knew what I was talking about. The rules say that when talking with an expert and you have a

learned treatise, and that includes these peer-reviewed articles that they've been talking about, the witness may be asked about them and may read parts of it aloud, or the lawyers may as a part of their questioning read parts of it aloud. Go ahead.

MR. ANDERSON: Thank you, Your Honor.

BY MR. ANDERSON:

Q. And, Doctor, tell us who the authors are and when this article was written.

A. This is an article by Celine Mary et al., or others, and it was published in 1998.

Q. And I see that it says, "Comparison of the *in vivo* behavior of polyvinylidene fluoride and polypropylene sutures used in vascular surgery." Do you see that?

A. I do.

Q. And is polyvinylidene fluoride also known as PVDF?

A. It is.

Q. Okay. And if you could just call out the bottom there, the bottom right under Materials and Methods.

What does the Materials and Methods section of scientific papers seek to tell the reader?

A. It seeks to tell them what the materials were that were tested and what methods were used to test them.

Q. We talked about the PVDF that was going to be studied in this particular piece of literature, and it also said

polypropylene monofilament in the title.

What's polypropylene monofilament? If you'll highlight that second sentence. It says the control suture was a polypropylene monofilament manufactured by Ethicon (Johnson and Johnson), and then it lists some place in Canada, under the tradename Prolene. Do you see that?

A. I see it.

Q. Based upon all of your review of the thousands of pages of literature and internal Ethicon documents, as well as the depositions, did you come to an understanding as to whether or not Prolene polypropylene manufactured by Ethicon is, in fact, the polypropylene that is contained within the TVT device?

A. I do.

Q. And is it?

A. It's Prolene. So that's the Ethicon product --

Q. Okay.

A. -- tradename.

Q. All right. If we could turn over, please, and just go to pages 6 and 7. I'm sorry. Fourth page, top right corner.

We go down to "After one to two years." Do you see that where I am with you?

A. I do.

Q. "After one and two years of implantation, the surface of the retrieved and cleaned PVDF sutures did not appear to be substantially modified. In contrast, the polypropylene

sutures explanted one and two years postoperatively showed evidence of surface deterioration, characterized by uniformly spaced circumferential cracking and peeling and flaking of the polymer material in the outermost surface layer."

Do you see that, sir?

A. I see it, yes.

Q. What is that telling us about these two polymers?

A. It's telling us that PVDF is much more resistant to degradation than polypropylene, and that polypropylene is more susceptible to degradation.

Q. And, in particular, is this the polypropylene that's contained in the TVT?

A. That's correct.

Q. If we could go to page 6 of Plaintiff's Exhibit 820 and call out the image on the top page, also from the Celine Mary article, Doctor. I want to show you these images. We talked a little bit ago about SEM images. Is that what we're seeing here on the screen?

A. That's right.

Q. Can you tell us what these particular SEM images show of the polymers that were analyzed in this study?

A. Well, the left-side pictures are PVDF, the right-side pictures are polypropylene, and it's very obvious that the PVDF is much more stable, undamaged, than the right-side material. Polypropylene is severely cracked and degraded.

Q. So in the -- when we were looking earlier at the language in the study where it says that the Prolene showed evidence of surface deterioration, characterized by spaced cracking, peeling and flaking of the material, is that what's shown here in the SEM?

A. Right. In the right photographs, some of the flakes had actually come off. That's why you can see different layers.

Q. If we could go to page 7, 205 of the article. Let's call out that conclusion on the bottom right, beginning with visual evidence. Let's call that out. Thank you, Michael. Highlight visual evidence.

"Visual evidence of surface degradation was observed after one and two years of the polypropylene but not the PVDF sutures. The stress cracking phenomenon is believed to be associated with the distinct skin/core two phase structure of oriented polypropylene monofilaments and points to the likelihood of PVDF having superior biostability to polypropylene over the long term."

When was this article written, sir?

A. 1998.

Q. 1998. From your review of the literature, do you have an idea of when -- and the materials you viewed in this case, as to when TVT was launched in the United States?

A. 1998.

Q. And when it talks there about this distinct skin/core two

phase structure that's cracking on the surface of the TVT Prolene, explain for the jury, please, what that means.

A. To make a filament, you use a die and then you force molten polypropylene or any plastic you're making a filament out of through the die. And when it comes out, it's hot, it's molten. The external skin of the fiber cools rapidly, and the interior portion of the fiber cools slowly. What this creates is an outer core that doesn't have time to form a crystalline structure -- and we call it amorphous -- an internal crystalline portion of the fiber, which is more resistant to degradation, although not completely.

Q. Based upon your training and your background and your experience and your review of all of the documents in this case, as well as your work looking at explanted medical devices, do you have an opinion to a reasonable degree of scientific certainty that you can state to the jury as to whether or not this phenomenon of surface cracking and degradation of polypropylene is something that is progressive?

A. It is.

Q. And what do we mean by "progressive"?

A. It means it's ongoing, so it will take some time to start and then it will start and then it will just continue indefinitely as long as it's implanted in a human tissue.

Q. So as long as the polypropylene is implanted in the human tissue, it will continue to degrade?

A. That's right, sir.

MR. ANDERSON: May I approach, Your Honor?

THE COURT: You may.

BY MR. ANDERSON:

Q. I'm showing you now what has been pre-marked as Plaintiff's Exhibit 1292. Before we put this up, let me ask you this, Dr. Jordi. In part of your review of the scientific literature in this case that I asked you to do and to be able to speak to the jury about today, did you notice whether or not there was any scientific literature on the degradation specifically of pelvic floor explants?

A. Yes.

Q. And is one of those articles in front of you there?

A. Yes.

Q. Did you review that article?

A. I did.

Q. Did you rely upon it, at least in part, in order to formulate your opinions in this case?

A. I did.

Q. Is it a recognized and reliable scientific journal?

A. Yes, it is.

MR. ANDERSON: Your Honor, we would offer it.

MR. THOMAS: No objection. 803(18), Your Honor.

THE COURT: All right. You may proceed.

MR. ANDERSON: Thank you.

BY MR. ANDERSON:

Q. And if we could just call out from the top there. Perfect. When was this article written, Dr. Jordi?

A. 2010.

Q. Do you see there it's in the *International Urogynecological Journal*? Do you see that?

A. I do.

Q. And the title is "Polypropylene as a reinforcement in pelvic surgery is not inert." What does that refer to when a polypropylene is not inert, based upon words in your industry?

A. It means it's going to react and degrade.

Q. Then it says "Comparative analysis of 100 explants," and the lead author there being Clave. Let's turn, if we could, to page 1 in the conclusion section of the abstract.

Thank you. If you could just look there -- are you there with me, Doctor?

A. I am.

Q. Let's highlight -- this is the first study to evaluate synthetic implants used in a vaginal approach for pelvic floor reinforcement. The study provides evidence contrary to published literature that's characterizing polypropylene as inert in such applications. Additionally, the study suggests the need for clinical trials comparatively investigating the performance of new types of monofilament prosthetics.

Prolene would be a monofilament prosthetic, correct?

A. It would.
Q. And, of course, PP stands for polypropylene there?
A. Yes.
Q. Okay. Now, if we could just turn over to the SEM images, page 5 of the article. Let's do all of them to begin with and then we'll zoom in. Thank you.
What are we seeing here in this image from the Clave study in 2011, Dr. Jordi?
A. We're seeing the degradation of polypropylene monofilaments.
Q. If we could just call out the LDMMF and the HDPPMF, what do all of those letters stand for, Dr. Jordi?
A. Well, the LDPMMF -- it's got a misprint in it. It should be PP for polypropylene.
Q. Is that density?
A. It stands for density.
Q. Is that another way of saying light weight?
A. Light weight. And the HDPPMF is the high density or the heavy weight.
Q. And is the Prolene in TVT a heavy weight polypropylene monofilament?
A. Yes.
Q. Now, from this article, we can't tell whether or not that is actually a Prolene polypropylene, correct?
A. Right.

Q. But we do know that the control sample on the left from this article is, in fact, Prolene, correct?
A. Yes.
Q. Okay. Let me ask you this, Doctor. Do these images here that you see represent -- what do they represent to you in terms of the polymer surface?
A. Again, bring back to the two structure surface that we talked about. The skin is cracked and the interior is still -- at this point in time, severe cracking of that outer layer of skin.
Q. And are these images that are contained in this scientific journal 13 years after the Celine article consistent with the degraded images we saw of Prolene in 1998 in her article?
A. Yes, they're consistent. Yeah.
Q. If we could turn now to Exhibit 1925. I want to go over three articles with you before we talk about some of the other things in this case.
May I approach, Your Honor?
THE COURT: You may.
MR. ANDERSON: Thank you.
BY MR. ANDERSON:
Q. Is this an article that you reviewed as part of your work in this case?
A. It is.

Q. Did you rely on it at least in part in order to formulate some of your opinions in this case?
A. I did.
Q. And slow down just a little bit. It makes it easier on Terry, okay? But you're doing fine. Is this from a recognized and reliable scientific journal?
A. Yes.
MR. ANDERSON: Okay. I would offer it, Your Honor.
THE COURT: Without objection?
MR. THOMAS: (Nods head up and down)
THE COURT: All right.
BY MR. ANDERSON:
Q. Highlight the top of this. This is an article in -- is that 2013, just last year?
A. 2013, yes, sir.
Q. And this is the Wood article?
A. Wood article.
Q. Dr. Wood. And material characterization and histological analysis of explanted polypropylene and other types of hernia meshes from individual patients. Do you see that?
A. I do.
Q. And if we could just go to page 5. Call out images A and D, please, on the left. A and D. I apologize.
What are we seeing here in the Wood article just from last year?

A. The pristine material at the top, and then the explanted material at the bottom is cracked.
Q. And is that a polypropylene on the top?
A. They're both polypropylene.
Q. The same -- so one is the control or the pristine product?
A. One is the pristine, control.
Q. What does the image on the bottom tell us, Doctor?
A. It tells us that after implantation, it has degraded and cracked.
Q. From your review of these last three articles that we looked at, as well as your background and training and experience in looking at degraded polypropylene that's been explanted from the body, do you have an opinion to a reasonable degree of medical probability as to whether or not the Prolene polypropylene in TVT will degrade in women's tissues?
A. Yes.
Q. And what is that opinion?
A. It will degrade.
Q. In addition to reviewing the scientific literature, you've told the jury that you looked at some internal Ethicon documents, correct?
A. Correct.
Q. Did you review any internal Ethicon studies where they

looked at the degradation of the Prolene suture that would be used in the TVT device?
A. Yes.
MR. ANDERSON: Okay. Exhibit 1291. May I approach, Your Honor?
THE COURT: You may.
BY MR. ANDERSON:
Q. I'm showing you what has been previously marked as Plaintiff's Exhibit 1291. Did you review and rely upon this, sir?
A. Yes.
Q. Can you tell the jury what that is?
A. It's results from what was called a 10-year dog study. It didn't go that long. This is seven-year dog study results and other results at various time frames, five years, seven years, showing you what's happened to the meshes that were implanted -- or the sutures that were implanted. Sorry.
Q. And who's performing this internal testing? Is this done by Ethicon?
A. This is done by Ethicon.
Q. Okay. If we could go to page 116. And, Doctor, what year was the seven-year dog study results?
A. I think it was --
Q. Did they start in '85?
A. It started in the '80s. So after seven years, you'd be

around '92.
Q. And would that be six years before the TVT was launched?
A. Yes.
Q. Okay. If we could go to bullet point two. In looking at this internal --
MR. THOMAS: Excuse me. Counsel, I'm sorry. Stop.
THE COURT: It will be just a second.
MR. ANDERSON: I would offer this into evidence, Your Honor.
MR. THOMAS: No objection. I would note that the numbers aren't sequential. So if you're going to direct his attention to a specific document and if you could give us some idea where it is.
MR. ANDERSON: Be happy to. It's only a couple of pages in that document, but we will direct your attention to them.
MR. THOMAS: Thank you.
THE COURT: Is this document a learned treatise or is this an exhibit?
MR. ANDERSON: It's an internal Ethicon dog study on the Prolene suture, and so we would've put it in as an exhibit.
MR. THOMAS: Just for the record, Your Honor, it's a collection of documents, as opposed to an individual document. And the collection of documents have been identified by the

plaintiffs as a seven-year dog study.

THE COURT: All right. And does it bear a number for identification purposes?

MR. ANDERSON: Yes, Your Honor, it does.

THE CLERK: 1291.

THE COURT: All right. You may proceed.

BY MR. ANDERSON:

Q. If we could go to page 116 and call out -- he'll just flag it for you. And after that, we're going to go to 129. If my math is right, that's about 13 pages later.

MR. THOMAS: Thank you.

BY MR. ANDERSON:

Q. And if we could just highlight from conclusions all the way down through the second bullet point, Michael. Let's highlight the top portion of the document so the jury can see the date of the study.

Looking at the conclusions from the seven-year dog study in which the Prolene was implanted, under conclusions, bullet point two, the two Ethilon sutures -- sorry.

"Approximately 50 percent of the Prolene suture surface was cracked due to degradation. In some areas, a lower degree of surface change was found, which had not been observed before. These marks could very well be the early beginnings of the usual cracks."

Do you see that?

A. I do.
Q. Okay. Then if we could go to page 115.
MR. THOMAS: 115?
MR. ANDERSON: 115. Sorry. It's a rather large document. Do you have it, Mr. Thomas?
MR. THOMAS: No, I don't. Can you tell me where it is?
MR. ANDERSON: It's right in front of you. I'll try not to refer to the Bates number to not confuse the record.
MR. THOMAS: I have it. Thank you.
BY MR. ANDERSON:
Q. Let's call out the date and title there. Is this further documentation of this large Prolene dog study?
A. Yes.
Q. Okay. And if we could go to the second bullet point. For the study, you indicated they looked at this at various time points, this 10-year dog study. So this would be when they were looking at certain sutures taken out at the seven-year time point?
A. That's correct.
Q. Okay. And is it your understanding from looking at the document that they looked at it from time points even prior to that?
A. Yes.
Q. Okay. So let's see what they said here. "Degradation in

Prolene is still increasing at seven years here, and PVDF, even though a few cracks were found, is still by far the most surface resistant in-house made suture in terms of cracking."

Do you see that?

A. I do.

Q. What are we talking about here in terms of the dog study at seven years?

A. By seven years' time frame, we're talking about even PVDF shows a few cracks; the polypropylene continues to degrade more.

Q. Let's go to page 129. Upon your review of this, did you notice that they also did these SEM images of the explanted Prolene suture?

A. I did.

Q. Is that what you have in front of you there, sir?

A. Yes.

Q. If you could call out the one on the top right there, please. Okay. What do we notice in here in terms of the polypropylene fiber that was explanted from these animals at year seven by Ethicon?

A. We're looking at the typical cracks in the outer skin of the two-component fiber.

Q. Is that consistent with the Clave article from the pelvic floor explants, the SEM images in that article?

A. It is.

Q. Is it consistent with the explanted polypropylene images from the Wood article?
A. Yes.
Q. Is it consistent with the explanted images from Mary -- Celine Mary from 1998 of the Prolene suture that was explanted there?
A. Yes, it is.
Q. Doctor, we showed the jury a few minutes ago the explant sample bottle where Jordi Labs had received the -- some of the explanted mesh and tissue from Mrs. Lewis. Do you recall that?
A. I do.
Q. Okay. Did I -- upon receiving that and dividing it in half and giving the defense consultants their half, what did you or at your direction have done with regard to Mrs. Lewis's explant sample as well as this Prolene control sample that you talked about earlier?
A. We had a whole battery of tests run to look for degradation.
Q. What did I ask you to do with regard to looking at the Prolene suture and -- the Prolene pristine sample versus the explanted sample from Mrs. Lewis's body?
A. We were tasked to do our battery of analyses and look for any differences between the pristine or new material versus the explanted material from Miss Lewis.

Q. In terms of a battery of tests, you talked earlier about there's a number of things that you can do in the polymer science industry in terms of looking at degradation of polymers and things like that.

Does any one particular laboratory have all the equipment necessary to do that type of analysis?

A. Generally, no.

Q. For instance, are some of these machines -- what are the prices we're talking about for some of these machines it takes to do this type of analysis?

A. Anywhere from 120,000 to half a million, sometimes a little more.

Q. SEM machines, scanning electron microscopes, what are we talking about in terms of pricing on that?

A. In the upper end there of that range. It depends on which model you get and what attachments.

Q. So given that some of your laboratories around the country don't have all of the equipment necessary, is it standard practice to share that type of work or to do analysis for one another?

A. We form what we call partner labs, and we have some capabilities they don't have, they have some capabilities we don't have, and we service each other.

Q. And has SEM analysis been something that Jordi Labs has performed for medical device manufacturers over the last 30

years in order to look at product failure analysis?
A. Yes.
Q. And who does -- do you do that in-house or do you have a partner lab that does that?
A. We have a partner lab.
Q. And did you send Mrs. Lewis's explant sample to your partner lab to have it undergo SEM analysis?
A. We did.
Q. We talked a little bit about that FTIR microscopy.
A. Yes.
Q. You said it's like taking a chemical photograph.
A. Right.
Q. Did you have that evaluated by FT -- her sample evaluated by FTIR microscopy?
A. We did.
Q. Did you include photos of those within your report?
A. Yes.
Q. Did you also perform any SEM analysis of the pristine sample?
A. We did.
Q. What's the purpose of doing that?
A. Again, we're looking for differences to see if -- and there were no cracks in the pristine. There were many cracks in the explant.
Q. What was the purpose of performing the SEM and the FTIR

microscopy test on Mrs. Lewis's sample that came from her body?

A. The purpose was to determine -- the first thing we saw from SEM was the cracks, the large-scale cracks. So the next question is, well, what is that cracked material. So we were able to remove some of that cracked material and run FTIR microscopy on the cracked material itself, and it was largely polypropylene, telling us that the cracked material coming off is polypropylene.

Q. So from your report, let's pull up one of the photographs of an SEM from one of pristine TVT Prolenes, okay? That's Exhibit 20, page 115.

He's flagged it for you there, Dave -- Mr. Thomas.

MR. THOMAS: Thank you.

THE CLERK: Is 20 admitted? This is Exhibit 20.

MR. ANDERSON: And just highlight the bottom one, if you could, and blow that up for us, Michael. Thank you.

BY MR. ANDERSON:

Q. So what are we looking at? Tell the jury what we're looking at here, Dr. Jordi.

A. We're looking at pristine fibers, pristine mesh material. And what's distinctive to me about this is that we have these die marks I call them or extrusion marks.

Q. Just put an arrow down perpendicular to that fiber, please, Michael. Are these the extrusion marks you're talking

about, Doctor?
A. Yes. They look like striations, and they're caused from minor imperfections in the die as it's being extruded. So we have these little rising and the lowering levels of the polypropylene in the individual fiber, but what you can see here is they look like little channels almost.
Q. And you said from the dies. Let's just make sure we're speaking to the jury and explain to them what that means when the polypropylene is going through dies, this extrusion. What are you talking about?
A. Well, again, the material is melted and it's forced under pressure through the die; and as it does, minor imperfections in the surface of the die are imprinted into this extruding material.
Q. And the die, you're talking about a form where they're pushing the polypropylene through it in order to treat the fiber?
A. It's simply a holder to allow the polypropylene to go through the form, the fiber.
Q. So on this pristine sample under SEM, do you see any surface degradation?
A. I do not.
Q. Okay. Now, if we could just pull up this slide from page 48 of the same exhibit. Now, is the sample on the right from Mrs. Lewis's explant?

A. It is.
Q. And what are we seeing there in the picture on the right?
A. We're seeing the usual cracks from the explanted material. On the right, which is the pristine, we don't have any cracks.
Q. Go back to the one on the right. What are we seeing over there to the right of that picture, that white blob? What is that?
A. That's tissue remnants from the explant.
Q. Okay. Mrs. Lewis's tissue?
A. Mrs. Lewis's tissue.
Q. And the one on the right, you said the usual cracks. Do you mean is that degradation?
A. That's degradation.
Q. Do you have an opinion, Doctor, to a reasonable degree of scientific certainty as to whether or not the TVT polypropylene degraded in Mrs. Lewis's body?
A. I do.
Q. Do you have an opinion to a reasonable degree of scientific certainty as to whether or not, if there's still mesh left in her body, whether it is continuing to degrade to this day?
A. I do.
Q. What is that opinion?
A. It will continue to degrade as long as it's in her body.

Q. You mentioned that these experts from the defendant were at your labs when you received the explant. Do you remember that?
A. Yes.
Q. Did they do a report in this case?
A. Yes.
Q. Did you review their report in this case?
A. I did. I did.
Q. Did you review SEM photos that their experts did?
A. I did.
Q. Okay. Can you please put up demonstrative 12-2? I'm sorry. J-1.
Just for demonstrative purposes, we're going to look at -- we'd like to put it up.
MR. THOMAS: For demonstrative purposes?
MR. ANDERSON: Sure.
MR. THOMAS: Yes.
MR. ANDERSON: Put the two images side by side, if you would, Michael, so we can try to make this go a little bit faster, that image and the next image, please.
MR. THOMAS: Pardon me. May I ask a question? How will you identify it for the record?
MR. ANDERSON: Ong's report, it's identified for purposes of plaintiff's exhibit list as J-1 --
MR. THOMAS: All I want --

MR. ANDERSON: -- and J-2.

MR. THOMAS: Just for your information, I want to be able to ask the witness questions about the same documents. You haven't given me copies of them. I want to be able to call them out so they can be put back on the screen so I can ask questions.

MR. ANDERSON: We're happy to call them out.

MR. THOMAS: Just identify them so that I can.

MR. ANDERSON: I just did.

MR. THOMAS: Thank you.

BY MR. ANDERSON:

Q. What are we seeing here in these two images?

A. We're seeing on the left the cracked material; and on the right, we're seeing cracked material, actually broken off. In both cases, they've broken off, but this is after a 20-step cleaning process, which we didn't utilize. But these are still the same cracked materials.

Q. And these are the images that were taken by defendants' experts?

A. They are.

Q. Are they consistent with the images that you took as well?

A. They are.

Q. Okay. I want to go to Exhibit 20, please, page 71. Exhibit 20. Doctor, we have seen -- we have seen in these SEM

photos -- pull it down for a second. We've seen in these photos those flaking particles.
A. We have.
Q. If somebody were to say to you, "Well, Doctor, how do you know those flaking particles are polypropylene," what would you say to them?
A. We do know it, and we tested it chemically by the FTIR microscopy to prove it.
Q. Okay. And would you like for us to put up the picture of the FTIR microscopy of particles from Mrs. Lewis's sample for the jury?
A. Yes.
Q. Is this from your report?
A. It is.
Q. Okay. Let's put that up, please. Highlight the top part, please, and tell the jury what we're looking at here.
A. That's just an optical micrograph. It's 150-power magnification of an individual particle that had flaked off of Mrs. Lewis's sample.
Q. You said it flaked off. How did you go about analyzing that?
A. The individual fibers that we saw that were cracked were rolled on an infrared transparent substrate. It's just a little sheet, but it lets infrared light through it. And then an individual particle which shows, and then that infrared

spectrum -- we've got a picture, in fact, of the chemical structure of this particle.

Q. How do we know that that particle that came off the surface of Mrs. Lewis's explant is polypropylene?

A. From the picture, which is below it.

Q. Okay. Let's show the picture below, please. Okay. Without getting -- without getting too polymer-sciencey, what are all these squiggly lines here?

A. The squiggly lines are absorption bands for each kind of chemical bond in the molecule. And what we have here is a composite of a little protein with a lot of polypropylene. So this particle is largely polypropylene. All the polypropylene bands are there. The little -- many of the little bands on the right -- I'm not going to go through the numbers right now, but there's four of them specifically are very small. And if you had even 50 percent polypropylene, it would be even hard to see those bands, but they're big and powerful, just like in a pristine pure polypropylene, telling me that this is largely pure polypropylene.

Q. Do you have an opinion to a reasonable degree of scientific certainty based upon everything you've viewed in this case and your 30 to 40 years of experience as to whether or not the flaking material on the surface of Mrs. Lewis's explanted TVT Prolene mesh is, in fact, polypropylene?

A. I do.

Q. What is that opinion?
A. It is polypropylene.
Q. Did you notice whether or not and from the defendants' expert reports whether or not they analyzed the flaking particles off of the polypropylene from Mrs. Lewis?
A. I saw no evidence of that in their report. No, they did not.
Q. What did their experts do to the explanted fiber from Mrs. Lewis before they analyzed the degradation?
A. They went through a complicated 20-step process, cleaning process, and then they didn't look at the particles like we did.
Q. Have you ever in your 30 to 40 years of practice ever seen anyone who -- any company in looking at explanted polypropylene use the same kind of 20-step process to clean the fibers?
A. Never in my life have I seen anything like that. If I looked at all the literature that we looked at earlier, this morning as well, they typically use one or two steps. And this is 20. It seems to be hugely excessive to me.
Q. What types of chemicals did they apply repeatedly to the surface of Miss Lewis's explant before they analyzed it?
A. They used sodium hypochlorite I think four times. They used nitric acid, concentrated nitric acid three times, which is a strong oxidizing agent. They used sonication, which

would violently shake the resin so that -- it's a high-frequent shaker is what it is, electrical shaker. It shakes the particles off. But then the problem was, they didn't even analyze the particles that came off.

Q. So after the defendants' experts applied chemicals and then shook the mesh violently in a 20-step process to make the particles fall off, they didn't even analyze the particles to see if they were polypropylene?

MR. THOMAS: Asked and answered, Your Honor.

THE COURT: Sustained.

BY MR. ANDERSON:

Q. Did you apply such harsh chemicals and shake, during your analysis, shake the particles off of Mrs. Lewis's sample?

A. No, we did not.

Q. Did they do FTIR microscopy of the particles that flaked off or that they shook off of Mrs. Lewis's sample?

A. No.

Q. A couple more questions. Do you have an opinion to a reasonable degree of scientific certainty based upon your 40 years of experience and the work that you have done as you have explained to the jury today and your review of all the materials as to whether or not prior to this explant coming out of Mrs. Lewis, whether the materials were degrading in her tissues? Do you have an opinion?

A. Yes.

Q. What is that opinion?
A. They were degrading.
Q. And do you have an opinion to a reasonable degree of scientific certainty based upon all of the things you've reviewed and your training and experience as to whether or not the remaining mesh that's in her body will continue to degrade for the rest of her life?
A. Most definitely, yes.
MR. ANDERSON: Nothing further at this time, Your Honor.
THE COURT: Cross-examine.
MR. THOMAS: Thank you, Your Honor. I need a second.
THE COURT: Certainly.
MR. THOMAS: I'm kind of old fashioned here. I've got a white board.
THE COURT: Can we keep going until noon, or do you need a break?
A JUROR: Keep going.
THE COURT: If anybody needs a break, raise their hand.
We'll keep going until noon. Thank you.
I've got white board and Smart boards and all kinds of things I'd share with you.
MR. THOMAS: Oh, I'm sorry. I didn't know.

THE COURT: I'm kidding. Go ahead.

MR. THOMAS: The only thing I knew for sure is I couldn't do it electronically.

THE COURT: I've got you.

CROSS EXAMINATION

BY MR. THOMAS:

Q. Good morning, Dr. Jordi.

A. Good morning.

Q. Just a second. I think it works. Does that work okay?

Dr. Jordi, you would agree with me that degradation is the loss of functionalness of a polymer for its intended purpose, wouldn't you?

A. It's the loss of chemical and physical properties is the way we would define it.

Q. If you gave an answer in your deposition it was a loss of functionalness of a polymer for its intended purpose, would that be correct, or do you want to change your answer?

A. It's similar.

Q. Okay. I want to put that up here because we'll be referring to it, I think, for a while today. So degradation is the loss of functionalness of a polymer. And the polymer here is polypropylene, correct?

A. Correct.

Q. Now, let's talk a little bit about how you prepared your samples in this case. Now, you received the samples as you've

described on direct examination. You and the Ethicon experts got together and you split the samples.
A. Right.
Q. You went your way and the Ethicon folks went their way.
A. Right.
Q. No agreed protocol about how to test these things. You kind of -- you did what you did and the Ethicon folks did what they did.
A. Yes.
Q. You've learned that the Ethicon folks -- and I'll refer to them later -- Shelby Thames from Southern Mississippi?
A. Correct.
Q. And Kevin Ong from Philadelphia?
A. Yes.
Q. And you, I think, and Mr. Kulcarni are the people primarily who did the work for the plaintiffs in this case; is that correct?
A. Well, many other people in our organization did pieces of the work --
Q. Okay.
A. -- as well.
Q. And the first thing you did when you received these samples -- and we saw the little container -- and the sample was packed in formalin, correct?
A. Correct.

Q. And formalin is a preservative?
A. Yes, it is.
Q. And it's routinely used with tissue to preserve that sample so pathology can be conducted on it later.
A. That's correct.
Q. And in these tissue samples, there's also protein, correct?
A. Absolutely, yes.
Q. And you knew at the time that you received these samples that there were protein on that mesh.
A. I did. You could see it.
Q. And you knew also that it was packed in formalin.
A. Yes.
Q. And you knew later that there was a chemical reaction between the formalin and the protein that formed a cross-linked polymer on that mesh, right?
A. That's right.
Q. You didn't know that at the time -- I'm sorry?
THE COURT: I didn't say anything.
MR. THOMAS: I apologize.
BY MR. THOMAS:
Q. And it was only after you conducted your testing that you realized that there was a cross-linked polymer of formalin and proteins on that mesh, correct?
A. Well, we knew there was a reaction. That's what fixation

means, there's going to be a reaction of formalin with the protein that's there, sure.

Q. Okay. And it's that reaction that fixes the mesh in place that allows a pathologist to slice the mesh and analyze it, correct?

A. It's primarily used in the industry for slicing tissue.

Q. Right. But that's what it does. It reacts with the protein, hardens it, so it can be sliced, correct?

A. The tissue, yes.

Q. Okay. And so when you began to clean this, you cleaned it with forceps, correct?

A. Correct.

Q. And forceps can be like scissors or tweezers or something like that?

A. Yes, tweezers; yes.

Q. And basically you took the mesh in your hands or Mr. Kulcarni took the mesh in his hands and took the forceps or the scissors and pulled the mesh away -- pulled the tissue away from the mesh, correct?

A. That's right.

Q. So you had forceps in one hand, mesh in the middle, forceps in the other, and you're just picking the mesh away.

A. That's right.

Q. And it took about an hour?

A. Per sample, yes.

Q. And that's all the cleaning that you did.
A. That's all the cleaning we did.
Q. Okay. You didn't attempt to remove the protein and formaldehyde cross-linked polymer that was on that mesh, did you?
A. I would beg to differ because when you pull the fixed tissue away from the fiber, you are removing this cross-linked polymer.
Q. Okay. So it's your testimony that by using the forceps, you were able to remove all of the protein and formaldehyde cross-linked polymer?
A. No, we obviously -- the infrared showed some protein. So there was still some protein, residual protein on the fiber.
Q. Okay. And what Dr. Thames did is Dr. Thames utilized what you described as this 20-step cleaning process, correct?
A. Correct.
Q. And you know that Dr. Thames, before he did his work, understood that there was this formaldehyde-protein cross-linked polymer, and it was his goal by this 20-step screening process to remove that. You know that, don't you?
A. Yes.
Q. And, again -- and so the forceps you used was all that you used to try to get at the protein-formaldehyde bond, correct?
A. Correct.

Q. Okay. And you know that even with this 20-step cleaning process utilized by Dr. Thames, he was unable to remove all of the protein from the mesh. You know that, don't you?
A. I would beg to differ with that, but so he said.
Q. Okay. Okay. You disagree with that.
A. I disagree with that.
Q. All right. Now, after you took the forceps and pulled the tissue away from the mesh, you handled it, correct? You put the mesh in your hands and felt it.
A. Yes.
Q. And as a matter of fact, you rolled it in your hands.
A. We didn't roll it in our hands, sir. We rolled it on the infrared transparent substrate.
Q. And it's when you rolled it on the infrared substrate that these particles came off, correct?
A. Correct.
Q. And when you handled it in your hands, it cracked and broke?
A. When we rolled it on the substrate, some of the particles came off.
Q. It cracked and broke. I believe you testified about that in your deposition.
A. It was already cracked, but it broke, yes, and the particles literally -- fragments came off.
Q. When you rolled it on there, it broke apart and these

particles appeared.
A. Correct.
Q. And as a matter of fact, it's these particles that came off the mesh when you rolled it is what you've tested in this case by FTIR microscopy.
A. That's correct.
MR. THOMAS: I'm not sure it's such a good idea, Judge.
BY MR. THOMAS:
Q. Now, you know Dr. Thames did not roll the mesh. Do you understand that?
A. I do.
Q. Did not handle the mesh like you did. Do you know that?
A. Well, that's if, if you say, you know, the 20-step cleaning process wasn't handling, again, I beg to differ, sir.
Q. Okay. You've described very specifically what you did with the mesh. You put it in your hands. You tried to feel whether it was stiff, correct?
A. Yeah.
Q. Whether it was brittle, correct?
A. That's correct.
Q. With your hands, right?
A. You have to do that, yeah.
Q. And then you rolled it on the FTIR microscopy plate where these particles came from, correct?

A. Correct.
Q. You don't know of any similar things that Dr. Thames did like what you've just described, do you?
A. I do not.
Q. Okay. Now, after you found these particles, you sent them out for testing, correct?
A. No, we sent out a piece of tissue with a mesh embedded in it to Evans Analytical who ran the FTIR microscopy for us, and they actually did the rolling on the infrared substrate that's --
Q. Okay.
A. It's part of their methodology, SOP.
Q. So Evans is an organization in California?
A. Yeah, the lab is, yes.
Q. And there's one in Minnesota as well?
A. That's the SEM lab.
Q. So you sent portions to the Evans SEM lab in Minnesota so that they could do the scanning electron microscopy, correct?
A. That's right.
Q. And you sent tissue also to California so that Evans could do the FTIR microscopy, correct?
A. Almost. Because the -- we were so sample-limited, we sent it out for SEM first, and then the Evans SEM folks sent it to the Evans FTIR microscope people in California when they were done with the SEM work.

Q. And you relied on Evans to do all of that work, correct?
A. Yes. In this case, yes.
Q. And you had no supervision, direction, or control over the work that Evans did on the SEM or the FTIR, correct?
A. Once the samples were sent, that was their responsibility.
Q. So FTIR and SEM, both done by Evans. And, again, the SEM is of the mesh, correct?
A. That is correct.
Q. But the FTIR is only a particle, correct?
A. That's correct.
Q. So you don't have an FTIR test of the mesh that's depicted in your SEM pictures, do you?
A. No, because we were looking at -- looking for the damaged material only.
Q. Well, was it your first choice to have Evans test the mesh by FTIR?
A. Well, I think that was true --
Q. And the reason why --
MR. ANDERSON: Excuse me, Your Honor. Can he finish his questions -- his answer?
THE COURT: Yes. Did you have additional --
THE WITNESS: Yes, sir.
THE COURT: Go ahead.
THE WITNESS: Thank you. The original mesh that

was -- we had tried to run an infrared of it, it was too thick. The transmission wouldn't let any infrared light through. So basically you couldn't run the total sample like that. You had to look at the particles or you had to do a process called thinning to get it thin enough to where you could get infrared light through it.

BY MR. THOMAS:

Q. It's true that Evans couldn't do that test, correct?

A. They could do it, sure.

Q. I mean Evans could not analyze the mesh by FTIR microscopy without some modification to the mesh as you've just described, correct?

A. Not in transmission mode, right.

Q. Okay. But other labs have the capability of doing that, don't they?

A. So did Evans.

Q. But they didn't do it.

A. No, because we saw the particles and we felt that that was the better way to go.

Q. I thought your first choice was to do the mesh first.

A. Well, it didn't run in transmission mode, so we ran the particles.

Q. Because you couldn't make it work.

A. That's not at all unusual --

Q. Okay.

A. -- in analyses.
Q. Well, just to be clear, Dr. Thames had all the equipment available to him in his laboratory, didn't he?
A. You mean Dr. Thames' lab? I don't believe so.
Q. Well, he is a professor at the University of Southern Mississippi?
A. Right.
Q. Past president of the University of Southern Mississippi?
A. Right.
Q. Polymer chemist for 50 years?
A. Yes.
Q. His name is on the building at Southern Mississippi, isn't it?
A. Sure.
Q. And the lab at Southern Mississippi has FTIR microscopy, doesn't it?
A. And just like us, they don't have SEM. So they had the SEM done by Dr. Ong at Exponent, not there.
Q. You're suggesting that Dr. Thames didn't do any SEM analysis at his lab?
A. The SEM work, the sample prep work was done by Dr. Ong, and I believe -- I thought the SEM work was done by him as well.
Q. Okay. Do you know that for sure? Do you know whether Dr. Thames and his group did any SEM work at the University of

Southern Mississippi in the lab there?
A. I didn't see that in his report.
Q. Okay. Put a question mark there.
Okay. And just so we're clear, Dr. Thames and his group did FTIR testing of the actual mesh, correct?
A. Yes.
Q. And so unlike you, Dr. Thames has both an FTIR and an SEM image of the same mesh that he tested, correct?
A. We have SEM and FTIR of the particles of the same mesh that we tested, yes.
Q. Okay. Now, you've complained a lot today about this 20-step cleaning process that Dr. Thames and Dr. Ong conducted, correct?
MR. ANDERSON: Objection, Your Honor.
MR. THOMAS: Criticized. Strike that. Sorry.
BY MR. THOMAS:
Q. You've criticized Dr. Thames and Dr. Ong for the way they conducted this 20-step cleaning process, correct?
A. It seemed grossly excessive to me, yes.
Q. And your complaint is that the nitric acid may have oxidized some of the polypropylene, changed it.
A. That, and the sodium hypochlorite and the sonication.
Q. Let's take them one at a time. It's true that in your analysis you were not able to find any evidence that the nitric acid used in that 20-step cleaning process changed the

polypropylene mesh at all, did you?
A. I'm sorry. I didn't understand the question. Was I able to do that testing?
Q. Did you -- do you have any opinion at all that the work done by Dr. Thames and Dr. Ong in cleaning the mesh altered the chemical structure of the mesh?
A. I believe it very well might have.
Q. But you don't have an opinion in that regard, do you?
A. I do.
Q. Really? Excuse me just a minute, Your Honor.
THE COURT: Uh-huh.
MR. THOMAS: I've got to move on and come back to that.
THE COURT: All right.
BY MR. THOMAS:
Q. Now, your complaint about this 20-step cleaning process is that the cleaning process actually removed any cracked polypropylene that may have been present on the mesh; is that correct?
A. It removed some of it.
Q. And if it removed some of the cracked polypropylene, you would expect the size of the polypropylene mesh to change, wouldn't you?
A. Yes.
Q. And, in fact, after this 20-step cleaning process, Dr.

Thames and Dr. Ong measured the mesh after it had been cleaned, compared to a pristine sample, correct?
A. Yes.
Q. And Dr. Thames and Dr. Ong found that there was no change in the size of the mesh after cleaning compared to the pristine sample, correct?
A. That's a relative statement, yes.
Q. It's true?
A. May I explain?
Q. First you can say yes or no, and then you can explain if you need to.
A. They said it was the same.
Q. Okay.
A. Now, they measured the diameter of a particle, of the fiber, and they said it was 170 microns. And they also showed that this thin skin we talked about earlier was 3.15 microns. So a total loss of surface width would be 6 microns, roughly, on both sides out of 170 microns. But their standard deviation is 7 microns. So it was well within experimental error. So I say it's the same.
Q. Okay. So you're saying that it's so small that their measurement technique was not able to capture any difference. Is that fair?
A. I'm saying it's within their margin of error.
Q. Okay. You didn't do your own testing, did you?

A. No, we were looking at the particles.
Q. Okay. It's a good control, isn't it, to test your cleaned mesh against your pristine mesh to see if the size of the mesh had changed?
A. Repeat the question, please.
Q. It's a good control, isn't it, to test your clean mesh against your pristine mesh to see the extent to which it's changed?
A. Yes, it is.
Q. So you don't have any problem with the fact they did that test.
A. No, sir.
Q. And you know they found that there's no change, but you argue with the fact that if it's -- it's within the margin of error and so there must have been some kind of change, according to you. Is that fair?
A. We saw it in the photographs. We saw the peeling material.
Q. But you never measured it.
A. No.
Q. And the only measurement of the mesh before and after the cleaning is by Dr. Thames and Dr. Ong, correct?
A. That's correct.
Q. Now, the real dispute between you and Dr. Thames is whether what you're seeing in this scanning electron

microscopy is cracked polypropylene, as you suggest, or whether it is this formaldehyde-protein cross-linked polymer that you didn't clean, correct?

A. Correct.

Q. And you looked at the same pictures.

A. We didn't correct it -- we didn't try to remove it with all those methods. We did remove the bulk with the forceps.

Q. I understand.

A. Okay.

Q. Well, Dr. Thames is of the position, of course, you didn't clean it well enough and what remains is the formaldehyde-protein cross-linked polymer and that's what you see cracking, correct?

A. That's what he's saying, yes.

Q. You disagree with that. What you think you're seeing is cracked polypropylene, correct?

A. Yes.

Q. And it's what you're seeing in the scanning electron microscopy that you believe is cracked polypropylene, correct?

A. Yes.

Q. But you've not tested that material by FTIR microscopy, have you?

A. The cracked material is exactly what we did test, and it came off the particle, came off the fiber.

Q. I'm sorry. Are you finished?

A. Yes. Sorry.
Q. You just testified a moment ago that you looked at the mesh through the scanning electron microscopy. You showed the jury pictures. You showed the jury pictures from Dr. Thames where he obviously takes the position what he's looking at there is the protein and the formaldehyde.
A. But he didn't look at the --
Q. Excuse me. Can I finish my question, please?
A. Okay.
MR. ANDERSON: Your Honor, can we have a sidebar, please?
SIDEBAR CONFERENCE
MR. ANDERSON: Your Honor, he is improperly trying to pit one expert's testimony again the other, and the other hasn't testified in evidence. So he's pulling out of the air that he disagrees with Dr. Thames and pits them against each other. They've never been in evidence --
THE COURT: He testified on direct examination when you made inquiry if he had relied on, read, and so forth Dr. Thames' and Ethicon's experts. So it's overruled.
MR. ANDERSON: You're talking about -- you're talking -- he's talking about doctor deposition testimony.
THE COURT: He said he reviewed the depositions too, I believe, didn't he?
MR. ANDERSON: I don't know that he did. I didn't

ask him about it.

THE COURT: He said he reviewed thousands of pages of depositions. And I'm asking you, are you saying he didn't review --

MR. ANDERSON: He did review it. We didn't inject the deposition in direct examination.

THE COURT: I overrule your objection. All right. You may continue.

BY MR. THOMAS:

Q. On direct examination you showed the jury the images of the mesh that had been taken by you and by Dr. Thames by scanning electron microscopy, correct?

A. Correct.

Q. And you testified that what you saw in the scanning electron microscopy is what you believed to be cracked polypropylene, correct?

A. Correct.

Q. My point, Dr. Jordi, is you never tested the material on that mesh depicted in that SEM to determine whether it's degraded polypropylene, correct?

A. I say that the particles that came off are the degraded material.

Q. It's a simple question. I asked you whether you tested the mesh. You tested a particle. You did not test the mesh, correct?

A. Yes.
Q. Is that correct?
A. Correct.
Q. Thank you.
THE COURT: Are you close to a place where we can take lunch?
MR. THOMAS: It's a good time, Your Honor.
THE COURT: All right. Ladies and gentlemen -- let me see counsel just at the bench for a second.
(Bench conference off the record)
THE COURT: As you can tell by the numbers of the witnesses and the subject matter of the case, logistics are an interesting phenomenon. As a consequence, I'm going to once again give you an hour and a half for lunch, and we may stop a little bit early today.
After that, I promise you that we will start at 9:00 and we will go to 5:00 if I have to sing and dance. So don't blame anybody. We're doing the best we can. And I don't suppose you'll really regret -- this is not going to lengthen the trial. The deadlines stay in place, okay? But I know some of you are fearful of the snow. When I watched the weather this morning, it looked like it's just going to barely miss us in Charleston if they know what they're talking about, which is a big if.
I think by the time we get out of here today, if we look

at our Smart phones or computers or whatever, we'll have a pretty good idea for planning on what you want to do this evening, and I know you've talked with the jury administrator about what your options are.

So let's go to lunch. If you all would come back at 1:30, and we'll take up as soon thereafter as we can.

(Recess)

(Bench conference with the Mr. Cartmell and Mr. Combs)

MR. CARTMELL: Yesterday during Dr. Rosenzweig's testimony, Exhibit 803 was admitted with a redaction, and we have done that. We redacted it out. Today there is testimony of Dr. Isenberg related to the same document, and we are admitting 803 as redacted as the document in the testimony for Dr. Isenberg.

MR. COMBS: And that is correct, and it's just subject to the same objections we had yesterday that was admitted in regard to Dr. Rosenzweig, but that is our agreement.

(Recess)

(In open court following the luncheon recess. The jury is not present.)

THE COURT: All right, Ms. Jones?

MS. JONES: I apologize, your Honor, I didn't see you sneak in here. Let me see if I can crystallize these things quickly.

First, your Honor, this arises because we have an objection that was stated in Ms. Angelini's deposition. The objection is from pages 4414 through the designated pages that run through page 55, line 16.

This testimony relates specifically to the documents that Ms. Angelini had reviewed in the context of preparing for her deposition. She's testified that she could not review all of the documents because she had left the company in 2005 and returned in 2006, and that during that time period her documents on her personal computer were lost.

There is a specific request in the midst of this testimony that's been designated that says there's a litigation hold company-wide at that time, did you know that, back in 2005. She said no. Back in 5. The question is yes.

I mean, I will tell your Honor that in an effort to try and resolve this, we offered to let everything be played, because she actually discusses the documents that

were not there. And I have this for your Honor. Other than the questions about the litigation hold notice, and that proposition was declined.

The reason that I think that this does not come in is -- I mean, they're several fold -- but first and primarily, so that we can deal with Ms. Angelini's deposition, is that as to Judge Eifert's ruling on the whole spoliation issue, she specifically found --

THE COURT: April, 2007?

MS. JONES: April, 2007. That's over a year -- or two years after -- one or two years after Ms. Angelini's testimony is involved. So, for that reason, we object to that. It ought not to come in. It ought not to come in.

As to the broader issue, your Honor, on spoliation, I'll simply raise it because Mr. Freese has indicated that they intend to offer the deposition of Mr. Mittenthal. You will remember that Mr. Mittenthal is the corporate designee on what I will call the document preservation issues. He has been deposed repeatedly. His testimony was available for Judge Eifert. Judge Eifert issued her ruling considering his testimony.

Last week or two week ago, following the issuance of Judge Eifert's opinion, the plaintiffs requested leave to take a trial deposition. Judge Eifert allowed the

plaintiffs two hours, as your Honor had previously on some other issues, to take a trial deposition. It was not to be a discovery deposition. It was to be a trial deposition. That deposition was taken on Monday of this week.

That deposition, your Honor, revealed absolutely nothing different from what was before Judge Eifert and was considered by Judge Eifert.

Judge Eifert specifically held that in reviewing all of the documents, she found that there was no showing of prejudice in this case; that the plaintiffs could not point to anything specific that showed that a document material to their case was not produced, that there was absolutely no showing of an intentional act or bad faith or willfulness on the part of Ethicon.

She did leave open the possibility that plaintiffs, under certain circumstances, might seek additional evidence when you're dealing -- and the example that she gave was a failure to warn claim and there was a missing sales rep file.

In this case, we don't hold that or anything like that. There was absolutely no new evidence introduced in Mr. Mittenthal's deposition.

Judge Eifert, as I said, limited the deposition to, quote, reformat the testimony in a way that would make it

easier for the jury to understand, not to plow new ground.

Judge Eifert was clear in her original ruling that she saw no basis, from a prejudicial standpoint in the Lewis case, to warrant any type of adverse inference. And, in the absence of that, your Honor, the evidence is simply irrelevant to the issues before this case, and, under 403, certainly ought not to be admitted before the jury.

Judge, at the deposition of Mr. Mittenthal, the first part of it is devoted to discussion of the litigation holds that Judge Eifert actually considered. Judge Eifert obviously issued her ruling that found that the April 30, 2007, date was the applicable date, so that the 2003 hold notices in 2005 were not relevant for this time period.

We discussed the very same custodians that Judge Eifert considered. They did not make any attempt to really establish willfulness or bad faith. That did not establish prejudice. In fact, Judge, in the Mittenthal deposition, they asked Mr. Mittenthal to agree that it was, quote, possible that evidence pertaining to the design defect claim was lost. And Mr. Mittenthal pointed out that it is unlikely that key design documents were not produced because they were centrally maintained. They were not maintained by the custodians that are involved in

this case.

In short, your Honor, to allow this issue before the jury at this point in time would be a complete disregard of Judge Eifert's ruling and that there's been no prejudice or anything to warrant the submission of these issues to the jury in this particular case, because there is no showing that the plaintiffs had been in any way impacted by their ability to present a design defect claim.

THE COURT: All right. Counsel?

MR. FREESE: Thank you, your Honor. I have a very different viewpoint from Ms. Jones about this. And let me start by saying that Ms. Angelini, she is a little separate. I mean, she's talking about she had her documents from the company. She was there -- she was head of marketing in Europe for a large measure of time, had responsibility for all these European doctors that we've been hearing about. She leaves the company for one week, and they wipe out her hard drive. One week. She comes back for whatever reason -- decides to come back to the company, her documents are all gone.

The mere fact of the loss of her documents are an important issue. Doesn't have anything to do necessarily with adverse inference. But the fact that all these documents that have been lost is information that is

important to us and should be heard by the jury.

THE COURT: Why? What does it tend -- what does it tend to prove?

MR. FREESE: A number of things, your Honor. So, when -- I'll move ahead in my argument here. First of all, the documents that are lost include all the foundational documents, the design studies, the --

THE COURT: There is evidence that she was in possession of design studies?

MR. FREESE: Not that -- that Ethicon was, your Honor.

THE COURT: How about her?

MR. FREESE: Well, she --

THE COURT: I mean, what's the evidence that her hard drive had anything on it to do with the design of the product that we're dealing with?

MR. FREESE: Well, because that was her job, your Honor. I mean, she was the one in charge of --

THE COURT: The head of marketing, you said?

MR. FREESE: Yes. I was actually not talking about Ms. Angelini just now.

THE COURT: Okay --

MR. FREESE: I thought you said what's the prejudice --

THE COURT: Oh, no, no, no.

MR. FREESE: Oh.

THE COURT: I thought you started with. Angelini, and I was just asking about that.

MR. FREESE: Yes, sir. And with Ms. Angelini the answer is she had the full gamut of information on marketing and what -- what the sales reps knew and what they were doing at the relevant time that she was at the company. And now it's all gone. We don't have an opportunity to tell you what was in there. And she said, well, I don't remember. All my emails were in there. I told --

THE COURT: What would have been in the sales information about defective design?

MR. FREESE: What they knew about the complication rate. I mean, the documents produced in this case are filled with sales and marketing people interacting with engineering people, talk about how do we deal with these companies, known complications and correspondence with doctors back and forth. I mean, this is how the company operates. The scientists and the engineers and the marketing people all work in tandem with each other.

THE COURT: That's 2005 in Europe; right?

MR. FREESE: Yes, sir.

THE COURT: Let's go to --

MR. CARTMELL: It was --

MR. FREESE: I'm being corrected, your Honor.

MR. CARTMELL: Her testimony was everything before 2003 as far as the consultants and payments, and all that, was gone. Everything on her hard drive that was before 2005 was gone when she left for a week, and then she came back.

THE COURT: I mean, she left for a week on vacation? She was fired? She left the company? What?

MR. CARTMELL: She went to another company. She said it was not for her. And she came back a week later and her computer had been wiped.

MS. JONES: Well --

MR. FREESE: And let me say, Judge, this is why I was talking about -- there's two different categories of Angelini documents. She talks about her own hard drive, but she also speaks about documents company-wide that they no longer have. And they have a declaration from their -- their internal control person talked about the documents they had, which --

THE COURT: You're losing me.

MR. FREESE: Okay. I'm sorry, Judge. I'm talking now about Ulmsten. All right.

THE COURT: All right, let's put Angelini aside and talk about the bigger issue.

MR. FREESE: Yes, sir. Yes, sir. I thought your Honor's question was what's the prejudice, and I'm explaining that Ulmsten --

THE COURT: I was trying to figure out what there was that -- somebody that left the company, I wouldn't find it terribly unusual that they wiped the computer and gave it to somebody else. But, be that as it may -- I mean, I don't see anything nefarious in the fact that she was only gone a week. She was gone from the company. She came back to the company. I would assume, regretfully, that when I leave the court, my hard drives will be unceremoniously wiped.

MR. FREESE: The different in her case, Judge, and what makes Ms. Jones' point all the more important is that at the time she left that company for that week there was, in fact, a litigation hold on her documents, her hard drive, everything she had.

And despite what Ms. Jones says, Mr. Mittenthal's deposition was taken this week, at Judge Eifert's instruction, and your Honor specifically said at the pretrial conference, his deposition will be read without cuts. It's a trial deposition. And remember your Honor very clearly said it will be played in its full format, without cutting at all and doing this. And we said that's fine.

Mr. Mittenthal made very clear -- very clear on Monday that the litigation hold at Ethicon and Johnson & Johnson worldwide was in effect from 2003 forward. There is no longer any question about that.

And I think, in Judge Eifert's order, she said it was uncertain, but she was sticking with the one that she felt most certain about, which was 2007. There is no longer any doubt about that. Okay?

But more importantly, more fundamentally, Judge Eifert found that there was a sanctionable conduct, which she awarded monetary penalties on. We're not asking to get that before the jury.

But she said she specifically reserved the right and was going to recommend to your Honor --

THE COURT: In a specific case, if warranted, I could give an instruction.

MR. FREESE: Recommend the presiding district judge allow plaintiffs -- we're the first bellwether case, so I assume we're plaintiffs -- the opportunity to introduce evidence regarding Ethicon's loss of relevant documents on a case-by-case basis, and, when appropriate, to tender an adverse instruction. We're not asking --

THE COURT: Appropriate documents, case-by-case basis. So, tell me about your -- tell me what are we fighting about?

MR. FREESE: Yes, sir, I'll tell you exactly what we're fighting about. To start with the Ulmsten documents, in 2005 and 2006 -- and they don't dispute this, Judge -- they had a pallet of 600 pounds of Dr. Ulmsten's -- all the Medscand documents. The studies, the patient-level data, the -- the -- I don't know if they're remnants -- the product he used to implant in women. And Medscand was going out of business. And they said we've got to figure out what to do with this stuff. Who wants it.

And there's a long discussion within the company about what -- Somerville, New Jersey, should get this part, some of that should stay here, some should be somewhere else. And on the parts of the design, the product --

THE COURT: The parts of the what?

MR. FREESE: I'll quote, your Honor, because they used a particular phrase.

THE COURT: Now, let's start with this premise: When we're talking about Judge Eifert, she said the duty to preserve started April 30, 2007.

MR. FREESE: Yes, sir.

THE COURT: Right?

MR. FREESE: And I respectfully think that now we know that that is not a correct date; that

Mr. Mittenthal has made clear that it's 2003. From that date forward, it was an unbreaking line of legal obligation to maintain --

THE COURT: So, tell me precisely what it is that Mr. Ulmsten said in his deposition that makes you believe that they had a duty to preserve all documents related to TVT, TVT-O, and the design thereof, beginning in 2003? What specifically did he say?

MR. FREESE: Well, the deposition is being delivered to us as we speak, your Honor, so I can't --

THE COURT: I can't rule on it if I don't know what it is.

MR. FREESE: Your Honor, I'm sorry. I don't -- I don't -- I've read it. I've read the dep -- what he says in his deposition, your Honor, is that from 2003 forward, every -- from design, marketing, planning -- it's an extraordinarily encompassing -- it would cover any possible TVT document, your Honor, from 2003 forward.

And Ms. Warren, who's in the courtroom, signed the letter. She could tell you, because she was the one who signed the letter saying everything that's TVT must be protected. We're involved in litigation. If we don't preserve it, we can be held responsible for not preserving it. It had everything about design, product, everything.

And Mr. Mittenthal testified from 2003 forward that

was an unbroken chain, and there were multiple litigations after that.

THE COURT: Okay, let's jump way forward, because I need to know what Mittenthal said if I am to deal with a new motion on spoliation based on his testimony.

But, skipping past that for just a moment, assuming that there was spoliation --

MR. FREESE: Yes, sir.

THE COURT: -- what would you have me do about it in this case and why would you have me do it?

MR. FREESE: Okay. At this time, your Honor, all I want to do is for you to allow me to put the evidence in of the destruction of the documents. I'm not asking for anything further. I'm not asking you to change Judge Eifert's ruling. This is something that I'm going to come back to you after the close of this case and ask you, once you've heard all the evidence.

But right now we are simply asking you to let us have Ms. Angelini talk about what happened to her documents, what happened to the documents of the company, and let Mr. Mittenthal tell the jury what documents were destroyed, when they were destroyed, and when the company had notice of a litigation hold, that they were responsible to keep those documents.

And, if I might, your Honor, let me tell you the prejudice to us. Because at the time of Judge Eifert's ruling we hadn't had a trial.

THE COURT: She said there was no prejudice.

MR. FREESE: So, now we have a trial, your Honor. So the key foundational documents of Ulmsten, the patient-level data, is gone. Well, guess what we heard in the trial? Ms. Jones stands up, from the moment this trial started, in opening statement, and says it was a remarkable breakthrough what this man from Sweden did for hundreds of thousands of women in this country. He came up with the greatest thing that's ever been known. And we don't have a single one of the documents to say whether it's true or not.

Mr. Isenberg, this morning, the medical affairs director, said, on their direct examination, Dr. Isenberg, tell us about Dr. Ulmsten. Oh, did you find his studies impressive? Yes, they were impressive. I met doctor -- I saw his stuff. It was wonderful.

Well, guess what, Judge? We don't have Dr. Ulmsten. God rest his soul, he's not with us anymore. We don't have his deposition, and, thanks to Ethicon, we don't have his documents.

THE COURT: And when were they destroyed?

MR. FREESE: Well, they were destroyed sometime

between 2006 and the present. And we know that from the email from the woman who's trying to figure out what to do with 600 pounds of Dr. Ulmsten's pallet of all the Medscand documents. So, we know, as of 2006, Ethicon had the documents in their control. They weren't in Medscand's file. They were now in the control of Ethicon. Okay? And they were figuring out what to do with those. And what they said is we'll send some here and we'll send some there, and the rest we'll chuck. That's a quote, your Honor. They said, we'll chuck.

THE COURT: First, the uncontroverted evidence is that Ulmsten's files became the property of Ethicon at some point prior to 2006; is that right?

MR. FREESE: That is correct, your Honor.

THE COURT: And that sometime in 2006 up to 2007, while Ethicon had those documents as their property, they destroyed them. Is that --

MR. FREESE: That is correct. And we know they had them, because we had emails talking about the 600 pound pallet of the mess they got, and now, in 2014, they are nowhere.

THE COURT: Do we even know what they were about? What evidence do we have -- do we have any idea --

MR. FREESE: We have the email describing what was in pallet.

THE COURT: Okay. What's it say?

MR. FREESE: It says it was design documents, it was patient-level data, it was the clinical trials that have been referenced many times in this trial. It references the product. The best I could tell, the phrase they're using -- they called it -- it appears to be referencing the product that Dr. Ulmsten was implanting in these women in Europe and putting in his studies.

All the stuff they talked about that was the foundational -- the foundational studies and work done by Dr. Ulmsten that was in their possession is now gone, and they were -- and we're getting whip-sawed by it, Judge, because they're standing up and saying he's the greatest thing that's ever happened --

THE COURT: And there is some specific litigation hold in place that references or is applicable to the Ulmsten documents; correct?

MR. FREESE: Absolutely. No question about it, Judge.

THE COURT: All right. And who put that in place? What legal department? What person?

MR. FREESE: Ms. Warren, sitting in the back of the courtroom.

THE COURT: Okay. Let my hear back from the other side on that.

MR. FREESE: Oh. I'd be happy to tell you about more prejudice, but if you want --

THE COURT: Go ahead. Go ahead.

MR. FREESE: Yes, sir. So, the next thing about Dr. Ulmsten -- now we're just talking about his scientific and medical stuff. Let's talk about the payments to Dr. Ulmsten. His company was paid $25 million. Okay? He was a 20% owner in Medscand. Now, we can speculate how much of the $25 million. We know he was a 20% owner, and his company was paid $25 million.

He was also paid $400,000 for each study that he produced --

MR. CARTMELL: We only know about the 1998 study.

MR. FREESE: No, we -- we know of one study that he -- the offer was for any study that he would submit. $400,000 per study if the study met certain safety rates and success rates, as dictated by Ethicon, before the study was ever created. Okay? And there was a whole other issue about --

THE COURT: What does that have to do with spoliation?

MR. FREESE: Well, I'll tell you, your Honor. So, now we -- we don't have the documents to look at. We know that he --

THE COURT: You don't have the documents regarding what to do with the 400,000?

MR. FREESE: In addition to those scientific documents and medical documents, financial documents were destroyed, your Honor. The payment history to Dr. Ulmsten --

THE COURT: Is there a dispute that he was paid the $400,000?

MR. FREESE: Well, there is, in the sense that there is a document -- there's a licensing agreement that we have, that we've showed many witnesses. And they say, I see it. What was he paid? I don't know. It says he was paid. I don't know, though.

MR. CARTMELL: Do you mind?

THE COURT: No.

MR. CARTMELL: Just because I took this deposition. There is no dispute that he was paid $400,000. We don't know if he was paid more than that, because they said the documents were lost. So any payment information before 2003 is lost. But they know he was paid $400,000 for the '98, and they knew that he was paid.

THE COURT: So, you would want to show that because documents regarding finances were lost, he might have been paid had more than $400,000?

MR. CARTMELL: For each study. Right. I said to Ms. Angelini, I said, do you know whether or not she's paid for each study. She said, no, I know about '98. And I said, well, then, you don't know if you lost the document. She said right.

THE COURT: Right.

MR. FREESE: So, we got that. And I need to ask your Honor, no further than Mr. Thomas' cross-examination of Prof. Klosterhalfen about how effective one could be on a cross-examination if you show the financial stake of someone who's trying to put forward scientific evidence. And they got Dr. Klosterhalfen in there to start talking about, well, you get a 1% royalty on this PVDF and --

THE COURT: You're not going to be able to -- even if you say that these documents are destroyed, you're only going to be able to say you don't know what he was paid. You're not going to be able to speculate he was paid a particular amount.

MR. FREESE: Well, your Honor, the reason we can't tell a particular amount is because they destroyed the documents. That's the reason we don't -- I mean, I would love to tell the jury that Dr. Ulmsten was paid $2 million, $5 million.

THE COURT: I understand, but the best you're

going to get would be -- and I'm not saying you are -- was that the documents, these financial documents, were destroyed, and that would include records having to do with his payment for clinical studies.

MR. FREESE: Absolutely, your Honor. That -- that is what I want.

MR. CARTMELL: I just don't want you to be misled. She did testify that he was paid $2,128,000. They know that. But they just don't know, the other documents that were lost, if it was more than that.

MR. FREESE: So --

THE COURT: Well, you've got it to $2,100,000.

MR. FREESE: Well, but you know, Judge, the bias is almost unlimited. You know, if he was paid $2 million -- if we know about $2 million, and he might have been paid four or ten, if we had the documents, that's an extraordinary amount of prejudice to us if we can't prove that and they had the information, yet allowed them to be destroyed when there was no question a litigation hold was in effect.

My next prejudice, Dr. Nilsson. You've heard about Dr. Nilsson in opening statement. You've heard about Dr. Nilsson in cross-examination. Ms. Jones had Dr. Nilsson's 17-year study in front of Dr. Rosenzweig, and was saying, look at what Dr. Nilsson has done.

THE COURT: So, what -- tell me -- tell me about this.

MR. FREESE: Dr. Nilsson is a paid consultant for Ethicon.

THE COURT: Uh-huh.

MR. FREESE: And, once again, your Honor, they have lost the financial records showing the payment to Dr. Nilsson.

THE COURT: Is he still around?

MR. CARTMELL: Yes.

THE COURT: Did you ask him how much he got paid?

MR. CARTMELL: He has not -- he's in Scandinavia and he has not been deposed.

THE COURT: Okay.

MR. FREESE: But they don't dispute that he was paid, your Honor. They simply say we don't know how much he was paid, and we don't know over what period of time he's paid. But, nevertheless --

THE COURT: Let me just stop -- I'm not a jury.

MR. FREESE: Yes, sir.

THE COURT: You're doing a good jury speech.

MR. FREESE: All right. I'll stop. You understand the significance of us having --

THE COURT: I understand.

MR. FREESE: Yes, sir. I'll stop there, I think, on the prejudice, Judge, but I think you get a flavor for what we're talking about here. And so, we're not asking your Honor to THE COURT: us do anything other than put before the jury the fact of this obstruction. They've been --

THE COURT: And then stand up during closing argument and say, God knows how much they were paid. Right?

MR. FREESE: Well, I mean, and I might convince your Honor to give us an adverse in its instruction. I don't know, but I'm not asking for that right now. I'm simply asking at this point that at the trial we be at least permitted to tell the jury that these potential biases exist.

And THE COURT: me tell you why that's important. Dr. Hart, who we play sometime, hopefully tomorrow, is testifying. He was -- he was the chief medical affairs officer for Ethicon.

THE COURT: We've got to hurry up.

MR. FREESE: Yes, sir. He was the chief medical affairs officer for Ethicon. And I took his deposition a couple months ago. And he said, yes, if we paid doctors and investigators, that immediately would put bias, it would put doubt into the credibility of our

studies.

THE COURT: And you've been bringing that out.

MR. FREESE: Sir?

THE COURT: I've heard that. I've heard that.

MR. FREESE: Yes, sir. Again -- and we're going to bring it out some more. But you said what arguments are we going to make. Once the jury hears Dr. Hart, we're going to tell them, see, even they agree that these studies that they've paid for -- and we just don't know the enormity of the payments or for how long they lasted. That -- that is, in fact, the prejudice. And, again, you know, the medical studies.

I'd go on, but I think your Honor has heard me enough. I don't know if they want to respond, but -- do you have any other questions, Judge?

THE COURT: No, I'm not going to ask.

MR. FREESE: Okay.

MS. JONES: Your Honor, we are simply rearguing what was reargued before Judge Eifert. Judge Eifert says, on page 37 --

THE COURT: On which page?

MS. JONES: I'm sorry?

THE COURT: Which page, I'm sorry?

MS. JONES: Thirty-seven. "At the hearing, plaintiffs were asked to elucidate the effects of the

missing evidence on their ability to prosecute their claims. Plaintiffs describe the difficulties they had encountered in fleshing out the events of 2006 through 2009," and she goes forward.

So, all we're asking your Honor to do is to completely reverse Judge Eifert, who considered this matter and all of the briefs and all of the documentation and all of the submissions before it, number one.

Number two, they're specifically asking your Honor to overrule Judge Eifert, who found that the triggering date for preservation was April 30, 2007 --

THE COURT: What about this fellow's recent deposition and --

MS. JONES: I'm sorry?

THE COURT: The deposition that was recently taken, where they have a witness who says new information concerning --

MS. JONES: No, your Honor.

THE COURT: -- when there was a hold.

MS. JONES: No, your Honor. Judge Eifert specifically said to the plaintiffs, you may take a trial deposition and you may cover everything that's been covered and put it in a format for a trial deposition. But it is not a discovery deposition. And there is absolutely not one word of new information in the trial

deposition by Dr. --

THE COURT: THE COURT: me just stop you right there. What new information was in the trial deposition.

MR. FREESE: I have it right here, your Honor, It just got delivered. Page 712, Mr. Mittenthal -- may I approach, your Honor?

THE COURT: Yes, but please slow down.

MR. FREESE: I'm sorry, I get talking fast.

I just refer your Honor to page 712, lines 16 through 20 of the question and answer of Dr. Mittenthal -- or Mr. Mittenthal.

MS. JONES: I'd like to respond, your Honor, when you finish.

THE COURT: All right, you may respond.

MS. JONES: And what they're asking you to do is to ask -- is to reverse Judge Eifert's opinion that says that the triggering date is April, 2003, when Judge Eifert specifically considered that in her opinion.

THE COURT: On page 13, she did.

MS. JONES: That's right.

MR. FREESE: Your Honor, the deposition didn't exist at that time. I don't know how she --

THE COURT: No, but she specifically considered that Dr. Mittenthal testified the existence of a litigation hold as early as 2003. She considered that.

MR. FREESE: And now Mr. Mittenthal has confirmed that it was 2003, and I now have the exhibit, your Honor, what was ordered to be -- what was ordered to be held by Ethicon from 2003 forward. And if I could approach, your Honor, I'd like to show you the litigation hold and show you the significance and the breadth.

THE COURT: Is this something she's seen?

MR. FREESE: This is the 2003 hold.

THE COURT: Had she seen that?

MR. FREESE: I believe she had, your Honor.

THE COURT: You want me to look at it again?

MR. FREESE: Well, you had asked me specifically --

THE COURT: I mean, I do read this stuff when it comes in.

MR. FREESE: I mean, I had it. I was embarrassed that I didn't have it earlier.

THE COURT: What I'm asking you all to do is calm down. That's what I'm asking you to do.

MR. FREESE: Thank you, your Honor.

THE COURT: All right.

Look, I want the defendant's answer on Judge Eifert's order and its effect on the Ulmsten documents. That is to say that the Ulmsten documents were, in fact, destroyed, involving clinical trials, design documents and

patient-level documents.

MS. JONES: Your Honor, I'm going to be honest in that I would need to respond specifically. My understanding is that exactly what those documents are that they had from Medscand -- Medscand had not been specifically identified. There is a palTHE COURT: that weighed 600 pounds. You would think that there was a significant number of product involved in it. Exactly what that was and what was in it, piece by piece, is unknown, but all of that happened before the triggering date.

And I would be happy, as quickly as I can, if your Honor wants to know, to get the specifics of the deposition cites and the documents for you. I just don't have the details of that right this minute.

THE COURT: All right.

MR. FREESE: And, your Honor, I think I've got it here --

THE COURT: Here's the -- Judge Eifert found no evidence of intention or bad faith in the destruction of any documents. Am I correct?

MR. CARTMELL: She has -- at this point -- at the point that she has before the evidence was taken -- and I'm not asking your Honor to undo anything Judge Eifert's done. Ms. Jones keeps saying that, but I'm not

asking you to undo it.

THE COURT: But what she said, and I adopt, and I hereby adopt, and ratify, confirm, and order her ruling to be a part of this trial as if it were my own, and it is.

What is it specifically that you want to do that she said could be done? That is to say, she said certain relevant documents in an appropriate case such, as a failure to warn case, where sales materials and records were missing, if I recollect. I don't have it in front of me.

Tell me what it is here you want. Because you were -- you're a good advocate, but the vigor with which you were advocating was obscuring what I was trying to get from you, and that is what do you want?

MR. FREESE: What we want is to read Ms. Angelini's deposition, as has been shown to you. We want to read Mr. Mittenthal's deposition, in toto, as your Honor said at pretrial conference, no cutting. Take it. We can ask what we want. They can ask what they want. And that is the best we can do with trying to explain what is missing.

THE COURT: And what do you say to that?

MS. JONES: I say to that, your Honor, is that it extends the trial, that it's totally irrelevant, it has

nothing to do with the plaintiffs' claims in this case. And if you look at -- I can show you exactly what Ms. Angelini testified about the documents that are missing from her computer.

THE COURT: Well, that will be helpful, because that's the one thing that I haven't seen, or, if I did, it got lost in the heap.

MS. JONES: So, I will show you exactly what she says to that, and then I think that what I will say as to Mr. Mittenthal's deposition is that it's simply irrelevant --

THE COURT: Yes --

MS. JONES: -- under 403. It doesn't come in. It doesn't serve to prove any fact in evidence in this case.

THE COURT: I don't -- I don't see any problem with reading exactly what she said. I don't see anything nefarious about it. And I'm not going to allow argument that there was anything nefarious about it. She said, when she came back, the documents weren't there. That can come in.

MS. JONES: Your Honor, I have -- the issue is specifically that she was asked on the next page, that you didn't get to.

THE COURT: I didn't see that.

MS. JONES: There was a litigation hold company-wide at the time.

THE COURT: I'm not going to get into that. I'm not going to allow it.

MS. JONES: Thank you, your Honor.

THE COURT: Now, I'm still concerned -- and I'm going to take under advisement -- I'm going to get this jury back here and we're going to get back on this trial.

MR. FREESE: Yes, sir.

THE COURT: I'm going to consider this. I'm going to go back and look at her report, and I'm going to think about this Mittenthal 600 pounds or 16 tons, whatever it was --

MR. FREESE: Yes, sir.

THE COURT: -- of documents. And to the extent you have information relevant to that, get it to me. Have some of your minions get it to my law clerks ASAP.

MR. FREESE: And, your Honor, I have the list here of what was on the palTHE COURT: . Do you want to now, or I can give it to Robin.

THE COURT: If that's what you want to give to my law clerk, give it to them.

MR. FREESE: Yes, sir.

THE COURT: Otherwise, just get to Sean or to Kate the information on the Mittenthal documents. I am

not playing his deposition.

Now, THE COURT: 's go.

(The jury returned to the courtroom.)

Please be seated. I'm sorry.

MR. ANDERSON: Can he take the stand?

THE COURT: Sure.

(Howard Jordi returned to the witness stand.)

All right, Mr. Thomas, you may proceed.

MR. ANDERSON: Can you put it back where it was so we can see it, too?

MR. THOMAS: Yes. I'm sorry.

THE COURT: Yes.

MR. ANDERSON: I can help you.

(Mr. Thomas placing chart before the Court and jury.)

MR. ANDERSON: Thank you.

THE COURT: You may proceed.

BY MR. THOMAS:

Q. Good afternoon, Doctor.

A. Good afternoon.

Q. You showed the jury a number of photos this morning of scanning electron microscopy?

A. Yes.

Q. And you showed the jury pictures of mesh fibers under scanning electron microscopy?

A. Correct, yes.
Q. And could you tell the jury, please, what it means to have something magnified 350 times?
A. It just blows it up to look 350 times bigger than it is life size.
Q. Okay.
MR. THOMAS: So, can you bring up page 20 -- excuse me, Exhibit 20, page 115, of Dr. Jordi's report, please? Exhibit 20, page 115. I believe that was in the -- I thought that you were going to put up -- thank you.
THE COURT: THE COURT: me remind both sides again, if, at the end of this trial, you haven't gotten all the transcripts which you should have submitted before the witness testified, and your exhibits properly recorded with the courtroom deputy, I will not grant a motion to supplement the record. You're on notice.
BY MR. THOMAS:
Q. Dr. Jordi, do you remember showing this to the jury this morning?
A. Yes.
Q. And SEM Figure 4 is a pristine sample; correct?
A. Correct.
Q. And SEM Figure 4 shows a magnification of 350 times?
A. Correct.

Q. And so, the image that the jury is seeing there is 350 times the actual size of that fiber; correct?
A. In the bottom photo, yes.
Q. And you've testified earlier about the surface cracking that you believe that you saw in the scanning electron microscopy to be about three, three-and-a-half microns?
A. That's the dimensions put on by Dr. Thames in his photo.
Q. Do you agree with that?
A. I agree with it.
Q. And so, three-and-a-half microns is three-and-a-half thousandths of a millimeter; correct?
A. Something on that order.
Q. Okay. And how wide is a human hair? About 60 microns?
A. I think it's about 60, yeah.
Q. Sixty microns. So, when you're talking about 3.5 microns, you're talking about 1/20th or so the size of a human hair, aren't you?
A. Approximately.
Q. Certainly not something you can see with the naked eye?
A. No.
Q. Now, earlier this morning we were talking about the

use of sodium hypochlorite and nitric acid, and your criticisms of Dr. Ong and Dr. Thames in their use of those materials to clean the mesh. Do you remember that?
A. Yes.
Q. And is your concern that the use of those materials may cause the polypropylene mesh to degrade? Is that correct?
A. Correct.
Q. It's true that you don't have an opinion as to whether the nitric acid used in the preparation of the Carolyn Lewis mesh sample damaged the polypropylene in the explant, do you?
A. I do have an opinion.
Q. Well, THE COURT: me bring up are deposition, first; volume 2, page 142, lines 19 to 25.
MR. ANDERSON: Volume 2, did you say?
MR. THOMAS: I did. Do you need a copy?
MR. ANDERSON: You were talking fast. Just the page and line?
MR. THOMAS: Page 142, 19 to 25.
BY MR. THOMAS:
Q. And the question I asked you a couple weeks ago:
"Do you have an opinion to a reasonable degree of scientific certainty that the nitric acid used in the preparation of the Carolyn Lewis mesh sample damaged the

polypropylene?

"ANSWER: Without testing, further testing at various levels, I can't answer the question."

Is that the answer you gave to the question at the time? Did I read that correctly?

A. Yes.

Q. And it's true, isn't it, that you don't have an opinion whether the sodium hypochlorite used in the preparation for the Carolyn Lewis mesh sample damaged the polypropylene in the explant?

A. I can't -- I can't say that's right. I've got to explain myself.

Q. Well, THE COURT: me take you back to your deposition again. Same day, volume 2, page 141, line 23, to 142, line 6.

"And THE COURT: me ask the question this way," is the way it reads. "Is it fair to understand that you do not have an opinion to a reasonable degree of scientific certainty that the sodium hypochlorite used in the sample preparation for the Carolyn Lewis mesh sample damaged the polypropylene in that sample?

"Yes, it's impossible for me to answer that definitively. I can only say it may have."

Did I read that correctly?

A. You read it correctly.

Q. All right. Now, the nitric acid that was used to treat the polypropylene was a 70% nitric acid solution?
A. Seventy percent.
Q. And it's true, isn't it, that if a person drank that amount of nitric acid, it would kill them?
A. Yes.
Q. We've talked before about polypropylene is a polymer; correct?
A. Correct.
Q. And polypropylene is a specific chemical molecule; correct?
A. Yes.
Q. And if the molecular structure of polypropylene is broken by degradation, the molecular weight of that molecule will be lower? True?
A. Generally, but it doesn't have to be always.
Q. Well, isn't it true that molecular weight is often a crucial factor in determining mechanical properties?
A. Yes.
Q. Now, if hydrogen peroxide had caused the degradation in this polypropylene mesh, there would be a change in the chemical structure of the mesh, wouldn't there?
A. Yes.
Q. And if there was a free radical that degraded this mesh, there would be a change in the chemical construction

of the polypropylene mesh?
A. Yes.
Q. The molecular weight analysis that you did on this mesh showed no change in molecular weight, didn't it?
A. In a gross sense, that's true.
Q. Okay. And, as a matter of fact, you've told us that the molecular weight analysis that you did on this mesh is not consistent with oxidation of the mesh?
A. The gross molecular weight or lack of gross molecular weight change is. However, we have the same --
Q. Is that true?
A. Yes.
Q. It's true that the molecular weight analysis that you did on this mesh is not consistent with oxidation of the mesh; true?
A. In a gross sense, that's true.
Q. Okay. Now, THE COURT: 's go to Plaintiff's Exhibit 1291, please. And do you have that in front of you? 1291 is a seven-year dog study you talked about this morning. Do you remember that?
A. Yes.
Q. And you've reviewed this before; correct? Before today?
A. Yes.
Q. THE COURT: 's go to a page that you talked to the

plaintiffs about. I believe it's page 187. It's 115, Jamie.

And this is October 15th, 1992, and you talked about the findings in that study. Under IV and GPC, down towards the bottom of that page, it talks about IV and GPC, and gel permeation chromatography. That's a test used to determine molecular weight, isn't it?

A. Yes.

Q. And it says, in the second sentence, "The GPC data was compared to data from a current 4/0 Prolene suture. The results indicate that there was no significant difference in molecular weight between the 4/0 Prolene control and the seven-year explants."

Did I read that correctly?

A. Did you.

Q. That means that there was no significant change in molecular weight over the seven years that these Prolene explant -- Prolene sutures were in these dogs; correct?

A. But you're not looking at the surface here, you're only looking at the total.

Q. Did I read that correctly?

A. I would read that as total sample, yes.

Q. Okay. Does it say total sample? That's what it says, doesn't it? There was no -- it says, "The results indicate that there was no significant difference in

molecular weight between the 4/0 Prolene control and the seven-year explants."

That's what it says, isn't it?

A. Yes.

Q. No change in molecular weight. No significant change.

THE COURT: 's go now to page 218, please, in the Bates number, the last three numbers. It's page 146, Jamie.

MR. ANDERSON: I'm sorry, counsel, what was your --

MR. THOMAS: Bates number 218.

BY MR. THOMAS:

Q. And Bates number 218 is an analytical chemistry department report. Do you see that?

A. Yes.

Q. And it's date submitted of June 23, 1992. Do you see that?

A. I do.

Q. And down to the bottom of the page there is a molecular weight analysis of the Prolene suture. Do you see that?

A. I do.

Q. And it says, "Prolene site 1, Prolene site 6," and it has molecular weight and molecular numbers entered. Do you see that?

A. I do.
Q. And underneath, under conclusions and comments, it reads, "Comparison of seven-year explants to current 4/0 Prolene sutures indicates no significant degradation."
Is that true? That's what it reads, isn't it?
A. In a gross sense, yes.
Q. It's the same seven-year dog study you talked about this morning; correct?
THE COURT: 's go to page 148, Jamie.
And this is the second page of an analytical chemistry report containing some more molecular weight testing down at the bottom, same place. And you see there where they're doing molecular weight analysis for dog 1995?
A. I do.
Q. And the conclusion reads, "Results indicate no degradation has taken place." Do you see that?
A. Yes.
Q. And that's the same seven-year dog study you were talking about this morning; correct?
A. Right.
Q. And there's another one on 149. 149, at the bottom of the page, again, same place. This is for a different dog. They're looking at sutures explanted from seven years, molecular weight analysis. And under conclusions

and comments do you see what it says? "Comparison of seven-year explants to current Prolene indicate no molecular weight degradation."

A. In a gross sense, yes.

Q. And there's more. Page 150. 150, you see the molecular weight testing right there in the middle of the page, right above Robin Rowling's signature. Do you see that, for Prolene?

A. Yes.

Q. And the conclusion reads, again, "Comparison of current Prolene 4/0 suture indicates no significant degradation of seven-year explant."

Read that correctly?

A. Yes, sir.

Q. And another part of the analysis for degradation is breaking strength or tensile strength. You'd agree with that, wouldn't you?

A. Yes.

Q. And on page 153 of this same set of documents, they do a tensile or breaking-strength analysis of these sutures, don't they? Have you read that?

A. Yes.

Q. Now, on page 153, right in the middle, if you look at the title of it, it says, "Interim report on the physical testing of Prolene PVDF Ethilon and Novafil after seven-

year subcutaneous implantation in the beagle dogs, ten-year BSR study."

Do you see that?

A. I do.

Q. And right in the middle of the page they start with Novafil samples. Do you see that? They talk about Novafil samples showing a decrease of 14% in breaking strength.

Do you see that?

A. I do.

Q. And then it goes on to say, "Prolene and PVDF show no significant change after seven years of implantation."

Correct?

A. That's what it says.

Q. And the conclusion of this report is, after seven years, that Prolene shows no significant change in breaking strength after seven years; correct?

A. Yes.

Q. Now, Doctor, you've talked at length today about how you think that the Ethicon polypropylene mesh has surface cracks, and that's evidence of degradation. Now, you're not able to determine how long that mesh may have been cracked, are you?

A. No.

Q. And there's -- there's no way for you to

quantitatively measure the extent of any cracking in the mesh, is there?
A. Just to physically look at it and see that it is.
Q. Yes. As a matter of fact, you're not able to measure the amount of oxidation that may be on the mesh quantitatively, are you?
A. We're able to see it through infrared spectroscopy of the particles, themselves, that are oxidized. They're flaked off.
Q. But -- but you're not able to measure the extent to which the mesh, itself, has oxidized; correct?
A. Well, it's the particles that flake off. That's what we studied. That appeared to be oxidized.
Q. But you're not able to measure the extent to which particles have fallen off of the mesh, are you?
A. No, but we did measure the oxygen level in the mesh with SEM EDAX.
Q. And it's true that you have no opinion about the extent to which any environmental stress cracking impacts the functionality of the polypropylene mesh for its intended purpose?
A. Well, the fact of the matter is, for it's intended purpose --
Q. Do you have an opinion, first.
THE COURT: Sustained.

BY MR. THOMAS:
Q. It's true that you do not have an opinion about the extent to which any environmental stress cracking impacts the functionality of the polypropylene mesh for its intended purpose?
A. Well, yes, I do.
Q. Well, THE COURT: 's look at your deposition, please. THE COURT: 's look at volume 1, page 94, lines 3 through 8.
And on line --
MR. ANDERSON: Excuse me, counsel, could you just give me a chance to find the spot?
MR. THOMAS: I apologize.
MR. ANDERSON: Thank you. Page 94. What lines are you on?
MR. THOMAS: 3 through 8.
MR. ANDERSON: 3 through 8.
MR. THOMAS: THE COURT: me know when you're -- are you ready?
MR. ANDERSON: Yes.
BY MR. THOMAS:
Q. The question was asked at your deposition, "Do you have an opinion in the Carolyn Lewis case about the extent to which any environmental stress cracking impacts the functionality of the polypropylene mesh for its intended

purpose?"

And your answer was, "I do not."

True?

A. I can't quantitate it. That's right.

Q. Now, it's your visual observation of oxidation that causes you to have the opinion that the oxidation of the mesh in the Carolyn Lewis mesh impacts the functionality of that mesh for its intended purpose?

A. The oxidation does -- does affect the mesh. It affects its brittleness.

Q. But it's your visual observation is the only thing that causes you to have that opinion; true?

A. No, because we saw increased carbonyls in the infrared of the particles that actually flaked off, which is evidence of oxidation.

Q. THE COURT: me have your deposition, please, volume 1, page 96, lines 17-22.

What is --

MR. ANDERSON: 96?

MR. THOMAS: 96, lines 17 to 22.

MR. ANDERSON: Okay. Thank you.

BY MR. THOMAS:

Q. "What is it about your work in this case that causes you to have the opinion that the oxidation of the mesh in Carolyn Lewis impacts the functionality of that mesh for

its intended purpose?

"Oxidation is bad. We see it."

Did I read that correctly?

A. Right. And I was referring both the visual and the infrared carbonyls.

Q. THE COURT: 's look at volume 1, page 95, 19 to 25. Page 95, 19 to 25, Jamie.

Line 19 through 25, Jamie.

MR. ANDERSON: Thank you.

MR. THOMAS: You ready?

MR. ANDERSON: Yes. Thank you. I appreciate that.

BY MR. THOMAS:

Q. The question is asked, "How does the damage that you observed affect the ability of the polypropylene mesh to function in its intended purpose?

"Well, something had to cause it to have it removed. I'm looking at the pictures. It's flaking. I'm looking at the oxidation. It's oxidized. I don't know how else to answer --

MR. ANDERSON: Your Honor, may we have a sidebar, please?

BY MR. THOMAS:

Q. "I don't know how else to answer the question."

Did I read that correctly?

MR. ANDERSON: May we have a quick sidebar?

THE COURT: Sure.

SIDEBAR CONFERENCE:

THE COURT: All right, sir.

MR. ANDERSON: I don't like sidebars. I'm sorry to do it.

THE COURT: That's all right.

MR. ANDERSON: But he's asking questions that are the same as it was in the deposition, and he's trying to impeach him with a question that's slightly different. And I'm going to ask counsel, if he's going to do that, to please read the questions correctly so I don't have to stand up and keep objecting.

That's my objection, sir.

THE COURT: I think that the answers are sufficiently identical to be used for impeachment purposes. I agree with you that counsel hasn't always read them as they were written. But they've been in front of the jury exactly as they are written on their monitor. I would just caution the defendant to be more careful.

MR. THOMAS: Thank you, your Honor.

THE COURT: Yes.

END OF SIDEBAR CONFERENCE.

BY MR. THOMAS:

Q. So, if we can add to this list, under Jordi, no change

in molecular weight. Correct?
A. May I explain myself?
Q. That's true, you didn't find any change in molecular weight; right?
A. I would have if I had been able to measure the surface.
Q. Ah.
A. Your own people did.
Q. Okay. You did not find in your testing any significant change in molecular weight; true?
A. In a gross sense, that's true.
MR. THOMAS: That's all the questions I have. Thank you.
THE COURT: All right, redirect.
MR. ANDERSON: Thank you, your Honor, just real briefly.

REDIRECT EXAMINATION

BY MR. ANDERSON:
Q. Dr. Jordi, counsel was asking some questions about this Dr. Thames; do you recall that?
A. I do.
Q. The guy that has his name on the building; do you recall him mentioning that?
A. Yes, sir.
Q. Is your name on your building, too?

A. Yes, sir.
Q. Okay. This Dr. Thames -- he said that Dr. Thames did this testing of the mesh. He made a point to you to say that you only tested the FTIR microscopy, that little chemical photograph. You only did it on the particles, he did it on the mesh. Do you remember that part of your question?
A. I do.
Q. In fact, Dr. Thames, in his report and in his deposition testimony, he didn't even get the mesh until it had already been scraped in this 20-step shake-and-bake process in Philadelphia; correct?
MR. THOMAS: Objection, your Honor.
BY MR. ANDERSON:
Q. Is that correct?
A. That's correct.
MR. THOMAS: Argumentative as well as --
THE COURT: Sustained as to leading and argumentative, and it's direct examination. Go.
BY MR. ANDERSON:
Q. Did Dr. Thames receive the polypropylene fibers before or after they had already been cleaned in this 20-step sonication shaking and nitric bath process?
A. After.
Q. Do you recall the deposition of Dr. Ong?

A. Yes.
Q. At the deposition of Dr. Ong, the person in Philadelphia who went through this 20-step process before he sent the cleaned mesh material to Dr. Thames, what did he do once that they -- they shook all the particles off? What happened to it?
A. They basically discarded them. They left them in solution and presumably disposed of. Anyway, they were not forwarded to Dr. Thames.
Q. Neither Dr. Thames nor Dr. Ong tested those particles that were shaken off of the mesh, did they?
A. That's correct.
Q. Now, he came over and wrote some things on this board which was summarizing some of your testimony. And counsel put "Degradation loss of functioness of polymer." But before that you had said something else. Do you recall what else you were talking in terms of degradation loss of functioness of polymer when you saw the degradation?
A. Well, I saw oxidation; I saw degradation; and then I saw cracks on the resin; I saw that the particles were polypropylene that actually came off. And then, as I said in my deposition, something had to -- I mean, it wasn't meeting its design function because, otherwise, why was it taken out of -- out of Ms. Lewis' body.
Q. He also put on this board, "Thames, no handling."

What would you testify in terms of whether or not Dr. Thames handled the mesh before he took the layers off?
A. What did doctor -- sorry.
Q. I'm sorry. I'm sorry. You said that you used forceps and that you handled the mesh, and that Dr. Thames did not handle the mesh. He handled the mesh, too, didn't he?
A. Yes.
Q. And when he had handled the mesh the pieces were already taken off; right?
A. Well, they went through the 20-step process.
Q. A number of times counsel asked you questions about molecular weight, and you responded in terms of grossness. I'd like to ask you, sir, this idea of the mesh didn't degrade simply because the molecular weight wasn't changed. When you kept saying, "In a gross sense, that's true," what do you mean by that?
A. That's the same discussion we had several times this morning, a two-phased system. The outer layer, which is thin, about 3 microns thick, and then the majority of the material internal, which is not degraded appreciably at this point in time.

So, again, when you run a GPC, it dissolves the entire fiber. The outer cracked material flakes or ropey bulk interior -- material that isn't degraded. So, when I get a number out, it's an average number, and that average

number has been diluted by the nondegraded internal portion of the fiber.

So, of course, the numbers look the same. However, in Ethicon's own document, as I tried to say, book 1918, page 248, Dan Burkley said that when he took out mesh, he took a needle --

MR. THOMAS: Objection, your Honor.

THE COURT: Is this something that was covered on cross-examination?

MR. THOMAS: No, your Honor. He's talking about a document that I have problems with.

THE COURT: That you what?

MR. THOMAS: I have problems with. If he's going to quote from the document that he's cited to, I need to have sidebar.

THE COURT: Okay. We'd better, because I'm not clear.

SIDEBAR CONFERENCE:

THE COURT: Okay, tell me what your objection is.

MR. THOMAS: your Honor, the witness is going beyond the scope of direct, beyond the scope of cross, and is going to discuss, I believe, a 1987 document that there's absolutely no foundation for him to reference in his foundation opinion testimony about any degradation

issues. So, I think it's beyond the scope of direct, beyond the scope of cross. And this document has not been admitted into evidence, and he's offering opinion testimony about the document.

THE COURT: What kind of document is it?

MR. THOMAS: It's two pages from a lab notebook from 1987 from a person by the name of Dan Burkley.

THE COURT: Who's he?

MR. THOMAS: Dan Burkley is a tech person from Ethicon who received explants from some professor and ran some testing on these explants. And there's just no description anywhere in the record, beyond this bare document, that supports any kind of opinion testimony by this witness on this topic.

THE COURT: Well, and it's close to being beyond discovery, but I'm going to THE COURT: you do it, and I'm going to THE COURT: him recross it. All right.

MR. ANDERSON: That's fine. Thank you, your Honor.

END OF SIDEBAR CONFERENCE.

BY MR. ANDERSON:

Q. Okay, going back to what you were just saying, we were discussing molecular weight. Is there any evidence in the Ethicon documents as to whether or not -- how molecular weight is affected by degradation or degradation affects

molecular weight? Go right ahead.
A. Yes. Dan Burkley received some explanted material --
Q. Dan Burkley is an Ethicon employee?
A. An Ethicon scientist.
Q. Okay.
A. And he had taken a needle to explanted mesh. And his comments on page 248 are that, "It flaked off like a waxy snow," just like it looks like it would in the SEM photos we showed you this morning.
And then he did a melting point, which, in a gross sense, correlates with molecular weight. And he said that the melting point was 146, I think, something like that, or 155 -- I don't have the document.
MR. ANDERSON: Excuse me, your Honor. May I approach?
THE COURT: You may.
BY MR. ANDERSON:
Q. Plaintiffs' Exhibit Number 35, so that we don't have to guess on the waxy mesh.
A. All right.
Q. Got that? Okay, we're going to really need to blow this up, because I think this is a lab notebooks.
A. Fourth paragraph is what you want.
THE COURT: Ladies and gentlemen, this is, in fact, beyond the scope of the original direct

interrogation, so this is as though he is putting it on for the first time, and the other side will then get to cross-examine about this.

All right, go ahead.

BY MR. ANDERSON:

Q. Now, we're talking about this discussion that you were having with Mr. Thomas on cross-examination about molecular weight. Do you recall that?

A. I do.

Q. And then, if we look at this, what is the date of that article there of this lab notebook?

A. September, '87.

Q. And what does the subject line say?

A. "Pro explants, IR microscopy again."

Q. And the first paragraph reads, "Prof. Godoin had agreed to surrender his Prolene explants from his explanted brats. Some of theirs were slated for examination by IR microscopy. F. Schiller examined them optically and by SEM. Eight-year-old sample was severely cracked, although the cracking was much less than previously observed."

Do you see that?

A. Yes.

Q. And then again, two paragraphs down from that, the sentence that starts, "The cracked surface came off easily

and had the appearance of handling of a waxy snow. Melting point of the surface material was 147 to 156. This is in the range of degraded Prolene, Prolene dissolves in approximately 155 to 165."

What does the all that mean in terms of what you were just saying?

A. The lower melting point that's shown here is indicative of degraded Prolene or polypropylene, and when it's degraded, it will have a lower molecular weight. But the only part that has the lower molecular weight is that 3 micron surface cracked area. The interior doesn't. So, when you run the entire sample, like I had to for GPC and like they did in the bulk sense, you don't see it. It's flooded by the majority material in the interior.

Q. As the --

THE COURT: Well, I need to understand this molecular weight business.

You've got a piece of something. It has molecules in it. And you can weigh it by some means or another; scientific means. Right?

THE WITNESS: Yes.

THE COURT: Is that correct?

THE WITNESS: I can explain that fairly easily.

THE COURT: No, I'm just asking you, can you do that?

THE WITNESS: Yes, sir.

THE COURT: And that's what you did as you weighed it? Is that right?

THE WITNESS: It's called gel permeation chromatography, and it's a size separation. You can describe it that way, but it's like --

THE COURT: Is it like -- like I'm overweight. Is it like -- I'll be generous to myself -- I weigh 200 pounds. Is it the same thing? This piece of polypropylene weighs X. Is that a molecular weight?

THE WITNESS: Molecular weight is the chain length, how many Prolene -- or how many polypropylene units are bonded together to make a polypropylene polymer. Like a house. You have a small brick house, that's a low molecular weight. If you have a big brick house, that's a high molecular weight.

THE COURT: All right. Is molecular weight different than mass?

THE WITNESS: No. Actually, that's a good -- except molecular weight of polymers is an average mass, because there isn't just one mass in the polymer.

THE COURT: It's the total -- and your words were gross weight? Is that right? Gross molecular weight is a total of all of the polymers in the strand?

A. Right. What I was trying to say is that the chain

length, the number of bricks in the polymer on the surface that's cracked, would be short, small, and the number of monomer units in the interior would be much longer and it would be a higher molecular weight.

But when I ran the two --

THE COURT: I understand.

THE WITNESS: Roughly 98 -- you know, because 98% percent of the material, on a weight basis, of that fiber is the interior, which isn't degraded like the surface. It gets drowned out. The surface effect gets drowned out, sir.

THE COURT: Okay. And just so that I don't get in trouble with the lawyers here, THE COURT: me ask you a couple more questions.

You're saying that it weighed the same before and after the flaking off, in a molecular sense, and you explain that by saying the weight is kind of a --

THE WITNESS: Molecular weight.

THE COURT: The molecular weight is kind of an estimate, or not an accurate number, or something?

THE WITNESS: In an average polymer, you're going to have chains that are made up of 90 monomer units, chains that are made up of 100, 110 and 120. So, when you spin out a number, what the machine does it averages it all together and spits out a number, which is called the

MW, the average molecular weight. It would be in between those two extremes. It would be like 110 in that case.

THE COURT: I'm sorry, counsel, but I've got to go a little further. The piece -- the piece that you weighed -- and I'm using that word because I don't know any other -- the piece that you weighed had so many of these bricks in it. Right?

THE WITNESS: The monomer units. Yes, sir.

THE COURT: The what? The monomer units?

THE WITNESS: Monomer. Each brick is a monomer unit.

THE COURT: Monomer. And when you get a bunch of them, they're polymers?

THE WITNESS: Yeah. Yes, sir.

THE COURT: All right. So, at the beginning, they have so many monomers in them -- THE COURT: 's say 100 -- all right?

THE WITNESS: Yes, sir.

THE COURT: And after you've finished the testing, after the flaking off, they still had a hundred monomers? Is that your testimony?

THE WITNESS: No. The flaked material might have 50, whereas the material in the inside, that second internal layer, that still had a hundred.

THE COURT: So, it's not -- so -- I could take

two-thirds of this piece of mesh and throw it away, and I would still of the same molecular weight as I had when I started?

THE WITNESS: No, sir. If you took -- and the way this is actually working out, we have the thin outer skin, remember?

THE COURT: No, no, no. I'm asking you. You said that if you take it off the outside, the inside still has the same number?

THE WITNESS: Right.

THE COURT: Well, if I cut it in half, why doesn't the other half still have the same number?

THE WITNESS: Well, it would, if you were -- but now you're running both the outer skin and the inside part together. In order to see this, you've got to get the skin material separate from the internal material. They're not the same.

THE COURT: I'm going to THE COURT: the lawyers straighten it out from here, because I'm still not clear.

THE WITNESS: Sorry.

THE COURT: Go ahead.

BY MR. ANDERSON:

Q. The outside surface could have a different molecular weight than the interior; correct?

A. Yes, sir.
Q. And, over time, as the mesh is longer and longer in the body and it degrades more and more, would you anticipate that the molecular weight would begin to go down as more bulk material is degraded?
A. Eventually, that will happen, and even on the interior. It's a slower process, but it will happen eventually.
Q. All right. So, at the time point that this was explanted from Ms. Lewis' body, it had not reached the point of degradation to where there was a significant difference of the molecular weight. Is that true?
A. On the inside part of the fiber.
THE COURT: No, on the total. The whole deal. It either weighs the same before and after, no. And you're telling me that it does.
MR. ANDERSON: Your Honor, you're talking about weight like if you put it on a scale, and that's not molecular weight.
THE COURT: Okay. I'm not putting it on a scale. I'm putting it on a molecular. Number of molecules, length of molecules, whatever. You're saying, if I understand you, and this is what I've got to get clear, because I think this is what they're quarreling about -- is it the same molecular weight before and after,

and you're saying it is, even though pieces have come off of it? Is that what you're saying?

THE WITNESS: I'm saying that the pieces came off, if I could run those by themselves, would give me a lower molecular weight than the interior part of the fiber. We actually have two different materials here.

THE COURT: Is the molecular weight the same before and after the flaking?

THE WITNEisthe way we had to run our test, yes, which is ignoring the surface.

THE COURT: I thought it was the surface that flaked.

THE WITNESS: It was, and that's what Dan Burkley showed when he took it off with a needle and it came off like snow, and then he measured the melt point, which was lower, which also means the molecular weight is lower.

THE COURT: I'd better quit.

MR. ANDERSON: I'll stop that part of the -- well, I'll move on, then.

THE COURT: Well, now, I mean, you do whatever you want. I'm --

MR. ANDERSON: It's just a different number of molecules on the outside.

THE COURT: It's for the jury to understand.

It doesn't really make much difference as to the depth of mine.
BY MR. ANDERSON:
Q. Please pull up demonstrative Exhibit 20, page 115. Demonstrative Exhibit 20, page 48.
MR. ANDERSON: May I approach up this way, your Honor?
THE COURT: Sure.
MR. ANDERSON: Thank you.
BY MR. ANDERSON:
Q. You were talking before about these striations. Do you recall that?
A. I do.
Q. And now I'm asking you if you saw striations over here on this fiber; correct?
A. I do.
MR. THOMAS: Your Honor, that's beyond the scope.
THE COURT: It is. I'll sustained it.
BY MR. ANDERSON:
Q. Do you recall when you were asked by Mr. Thomas on cross-examination about that you had a striking difference of opinion with Dr. Thames in that the cracked surface of the SEM photographs from Ms. Lewis, Dr. Thames said they were protein and you said they were polypropylene. Do you

recall that part of your cross-examination?
A. Yes.
Q. And, as part of that cross-examination, would it be helpful for you to explain to the jury the two photos that we just looked at in terms of what it looked like on appearance on the surface of the material?
A. That's correct.
THE COURT: Are these photos that we've already got in evidence?
MR. ANDERSON: Yes, sir.
THE COURT: All right. Go ahead. I'll overrule.
MR. ANDERSON: Can you put that back up.
BY MR. ANDERSON:
Q. Remember you were talking about the these striations being caused in the guides as it went through the extrusion process during manufacturing?
A. They're called extrusion marks.
Q. Is the cracking on the right-hand picture going through the extrusion marks on the polypropylene?
A. They are, which is how I know that those cracks, the cracked material there, is polypropylene. It's another way of -- it's not like infrared. It's just an eyeball way of telling it's the same thing as the other polymer.
Q. And if we look at that big blob of white tissue to the

side, is that polypropylene or are those proteins?
A. That would be protein. That would be tissue.
MR. ANDERSON: Thank you. No further questions.
THE COURT: Okay, counsel.
RECROSS-EXAMINATION
BY MR. THOMAS:
Q. I believe it was Plaintiff's Exhibit 35 which you just read. Was that the lab notebook?
MR. ANDERSON: I can't hear you, Dave. I apologize.
MR. THOMAS: I'm sorry. I apologize. I put my mike away. Sorry about that.
BY MR. THOMAS:
Q. Plaintiff's Exhibit Number 35 are the two pages of the lab notebook; is that correct?
A. Yes, sir.
Q. You don't know whether -- where those explants came from, do you?
A. No, sir, I just have this material.
Q. You don't know the circumstances of their creation, do you?
A. No.
Q. You don't know the nature of the experiment that was being performed, do you?

A. Well, it tells me they're Prolene explants from --
Q. I understand that, but you don't know the experiment that was going on or any history behind these two pages in this document other than what you have in front of you?
A. No, I don't. Of course not.
Q. The document refers to photo-oxidation, doesn't it, on page 2?
A. Well, that page 2 discusses photo-oxidation, but how is photo-oxidation on an explant in the first place?
Q. Exactly. There would not be photo-oxidation in an explant, would there?
A. No.
Q. And photo-oxidation can degrade polypropylene, can't it?
A. Its one of the many ways it can, yes.
Q. All right. Now, THE COURT: 's talk about molecular weight a little bit. A little bit, I hope.
You did one test on molecular weight on the Carolyn Lewis explant; correct?
A. And Christine's, yes.
Q. Okay. And on the Carolyn Lewis explant you found no significant change in molecular weight; correct?
A. In a gross sense, that's correct.
Q. All right. You did not attempt to scrape off any of the material that you claim to be cracked polypropylene

and measure that for molecular weight; correct?
A. How I wish I could have done it. I didn't have enough materials.
Q. The answer to my question is no, you did not test; correct?
A. No.
Q. The answer to my question is did you test any flaked material off of a polypropylene mesh for molecular weight?
A. Did not have enough to test.
Q. So, you don't know, without testing, whether there's any change in molecular weight on the surface of that polypropylene?
A. Judging from this paragraph in your own document, yes, I do believe that's the case.
Q. Excuse me, Dr. Jordi, have you tested that?
A. Have I tested what?
Q. Any exterior mesh -- strike that. Have you ever measured -- you've already answered my question. You have not measured the flaked material from the Carolyn Lewis mesh sample to determine whether there was any change in molecular weight?
A. Didn't have enough to test.
MR. THOMAS: Thank you.
THE COURT: May the witness step down?
MR. THOMAS: Yes, your Honor.

MR. ANDERSON: Yes, your Honor. Nothing further.

THE COURT: May he be excused?

MR. ANDERSON: Yes, your Honor.

THE COURT: Thank you, Doctor. You're excused. Call your next witness.

THE WITNESS: Your Honor, what do I do with all of these materials? Anything?

THE COURT: That's going to be up to the lawyers to figure out.

THE WITNESS: Just leave it?

THE COURT: Just leave it right there.

THE WITNESS: Yes, sir.

(The witness withdrew.)

MR. CARTMELL: Did you say it? I missed it. I'm sorry.

THE COURT: I said call your next witness.

MR. CARTMELL: Oh, I'm sorry. Laura Angelini. She's the marketing director from Ethicon.

THE COURT: Okay.

MR. CARTMELL: Your Honor, may we approach real quick? There is an objection that we need to visit about that still exists.

THE COURT: All right.

SIDEBAR CONFERENCE:

THE COURT: All right.

MR. CARTMELL: Sorry about the delay.

THE COURT: All right.

MR. CARTMELL: The Angelini deposition, we are all good to go on our part. They've cross-designated what they wanted to on our part.

THE COURT: Uh-huh.

MR. CARTMELL: And then what I'm talking about is all this green stuff here. This is all their designations, the green stuff. They're talking to a marketing person about all kinds of literature, all kinds of opinions related to what a doctor would say, and we have objected to that as outside the scope.

MS. JONES: I confess, your Honor, I thought it was all agreed upon. This is if first time I've heard that there was any objection to it.

MR. CARTMELL: Well, see, this is what I'm talking about. They come from your office and these were the objections that were in place at the office. And this was all -- none of this is part of our designation. You did -- you did your Rule 26 designations.

MS. JONES: I'm saying counsel --

MR. CARTMELL: This is your direct. You can play this in your case, but it's beyond the scope of our cross.

MS. JONES: I hear what you're saying. It's beyond the scope. What I'm telling you is that until 30 seconds ago, I was under the impression that everything was agreed upon.

THE COURT: So, we're going to go home right now, all right?

MR. CARTMELL: We're ready to play our part, your Honor.

THE COURT: Look, I honestly -- this -- this is the last time I'm going to say it. First, here's the rule. Present the transcript to the courtroom deputy Clerk before you play the videotape or recording, or present the deposition in any other way, as required by the rule. And that is the transcript.

If you have not been able to resolve the objections, then instead of playing it on videotape, I mean, any objections from here on out, we're going to read it, and you can object, you can do whatever you want. But that's how we're going to do it. No more, period. Otherwise, get one of your lawyers and put them on the stand, give me a transcript, start reading and start objecting. That's it.

MS. JONES: Your Honor, I understand your ruling. If they want to play their portion now, without cross-designations, I won't have any objection to doing

it. We will play ours during the course of our case.

All I'm saying to your Honor -- and I hear what you're saying in terms of working it out, but we have to know a little bit in advance if there's an issue.

THE COURT: I'm sorry?

MS. JONES: We have to know a little bit in advance if there's an issue. If they want to go ahead with their part, we'll reserve our right to play ours in our case-in-chief.

THE COURT: The next time somebody comes up here and says there's an issue, that's the end of the discussion. We're going to read it, understood?

All right.

MS. JONES: Understood.

THE COURT: Now, based on the representation of the defendant, if you want to go in and put this in, I think it will be better than wasting the jury's time.

MR. CARTMELL: I do, too.

THE COURT: And we can do the rest later. So, THE COURT: 's do that part.

MR. CARTMELL: Thank you, your Honor.

THE COURT: And don't forget to present the transcript to the court reporter.

END OF SIDEBAR CONFERENCE.

(Video deposition of Laura Angelini played.)

MR. CARTMELL: Just one more, your Honor, small.

THE COURT: All right.

MR. COMBS: Judge?

THE COURT: Yes.

MR. COMBS: May we approach?

THE COURT: Yes.

SIDEBAR CONFERENCE:

MR. CARTMELL: Go ahead.

MR. COMBS: Judge, we stood up here 30 or 40 minutes ago and Mr. Cartmell objected and said he couldn't play the clips that we had designated to play, but that they were going to be playing the clips that we had designated and that were counter-designations to this clip. And we just didn't play them. I mean, right here, this is what they gave me. And right here they just cut them off right in the middle.

MR. CARTMELL: What was cut off?

MR. COMBS: Right here.

MR. CARTMELL: What, the last second wasn't played? We'll play that again. I apologize.

THE COURT: You want this part?

MR. COMBS: I don't know, I'm going to have to look.

THE COURT: Well, go ahead and --

MR. COMBS: Right this second? I'm sorry, I didn't --

THE COURT: Wait.

MR. COMBS: I'm sorry, I didn't mean to interrupt you, Judge. I'm sorry.

THE COURT: What part of the deposition do you believe there's an agreement to play, and you may take the time to look and find it.

MR. COMBS: Judge, I mean, obviously, there was the clip that was just stopped in midsentence.

THE COURT: And --

MR. COMBS: And there are, in addition to that, the cut that they gave us this morning. There are --

MR. CARTMELL: It's going to be played.

MR. COMBS: -- there are ten pages. I mean, are you still planning to play those?

MR. CARTMELL: Yes. This is our cut.

MR. FREESE: That's what Christy said. She said play it.

MR. CARTMELL: He did cut off your cut. I'll tell him to replay it. It was three sentences.

THE COURT: I do understand that Ms. Jones said that the parts designated by the defendants would be played in their case. You understood, if I get your objection, that the parts that were -- were agreed upon as

responsive to the direct examination would be played today, and the other parts to which they had objections would be played in your case? Is that what you're saying?

MR. COMBS: Yes, sir, your Honor. There were two clips that redirect was conducted after -- on a second day of the deposition, and those two clips are what I understood would be played in our case. And we've agreed to play them in our case.

THE COURT: But there's some now that you would like to go ahead and play. And are those -- any of those things that you had objections to?

MR. CARTMELL: No. There was that one little short thing that did get cut off in the middle.

THE COURT: I mean, but he's talking about another several pages here.

MR. CARTMELL: Those are ours. Those are ours.

THE COURT: I'm sorry.

MR. CARTMELL: No, the next --

THE COURT: No, no, he's thinking that you agreed to play their responsive parts of the testimony today and the parts that you objected to as nonresponsive would be played tomorrow.

Isn't that what you're saying?

MR. COMBS: Judge, if there's no more that they want to play of this deposition, I'll sit up and I'll shut

up, and we'll just go --

MR. CARTMELL: No more of the next, you mean? Because we do have more of those next pages, obviously.

THE COURT: I don't understand. Do you all want to work it out right now?

MR. CARTMELL: I can explain real quick. We gave him this. That has all of our designations on it. He stood up because it cut off three sentences. There's no more that they designated in between then. We just then will finish this. It's like 10 pages. It'll take no more than 10 or 12 minutes that we're going to play right now.

THE COURT: That's what you're talking about?

MR. COMBS: Yes, sir, that's the objection.

THE COURT: All right. THE COURT: 's go ahead and play the ten pages.

END OF SIDEBAR CONFERENCE.

THE COURT: All right? We've got about ten pages, and then we're going to break for the day.

(Videotape deposition of Laura Angelini continues.)

MR. CARTMELL: That's the end of the deposition of Laura Angelini, your Honor.

MS. JONES: We'll reserve our right to visit that until later, your Honor.

THE COURT: All right.

Ladies and gentlemen, we're going to recess early for the day. I recommend that you take a conservative approach making the decision about whether to go or stay home.

The weatherman has the snow going slightly to the east of us, but the forecast is 100% snow, with 3 to 5 inches in Charleston.

So, I think it will be important that you err on the side of caution in terms of going forward. We can't go forward without all of you. I need you all. And, as you can see, this is quite a large undertaking with a lot of people involved.

And I recognize, as do the lawyers and the parties, the imposition that this places upon you, but I ask that you eat a good meal on the government, and that you enjoy yourself as best you can.

Finally, I have to say, do not discuss the case among yourselves, don't THE COURT: anyone to discuss it with you, don't watch anything about it, listen to anything about it, read anything about it, use social media, talk to anybody or allow anybody to talk about it in your presence.

I'll see you back here tomorrow morning, all of you, ready to go at 9 o'clock. And we're going to have a full day tomorrow with no big long breaks.

(The jury withdrew.)

Looks like we gained all of an hour and 15 minutes through your additional work.

Right now, unless things get much, much better, which I'm an optimistic person, I'm considering putting an order in place for all of your cases that will be very restrictive on how objections are made and handled in video depositions.

Just as a thought, all video depositions may have to have two double-spaced page statement of objection and argument in a week in advance, with specific line references and attachments of those lines. A day later there will be a two-page response, a day after that a reply.

After that, any objection, after I review them, found to be frivolous will result in a $1,000 sanction, and if found to be a part of a pattern of sanctions, will result in a very substantial judgment.

I'd rather not do that, so please meet.

Good night.

(Proceedings adjourned at 3:46 p.m.)

* * *

CERTIFICATE OF OFFICIAL REPORTERS

Teresa M. Ruffner and Harold M. Hagopian do hereby certify that the foregoing is a true and correct transcript, to the best of our abilities, from the record of proceedings in the above-entitled matter.

s/Teresa M. Ruffner — February 12, 2014
Reporter — Date

s/Harold M. Hagopian — February 12, 2014
Reporter — Date